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Camera & Microphone with Telepresence system

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Speaker

Speaker

Monitor

14

Laser Printer

3-Way Video PC

Keyboard

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Mouse

16

NT-16

17

LAN/WAN Connectors

ISDN Lines

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36

120kbit to 360kbit

ISDN Lines

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NT-16

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A METHOD AND SYSTEM FOR AN ELECTRONIC BANKING SHOP

FIELD OF THE INVENTION

This invention generally relates to a banking facility layout, and a method
5 and system for handling customer banking functions in a customer pod via
telecommunication with a remote bank representative. The invention includes
such services as completing forms, opening accounts, viewing videos, obtaining
information and demonstrations about products, and accessing a network, such as
the Internet. The invention also includes a system for organizing a facility layout
10 for performing these remote services and other banking functions.

BACKGROUND OF THE INVENTION

Existing art for banking services includes both automated and human teller
and other banking representative services for customers. Existing automated teller
15 machines (ATMs) and Customer Access Terminals (CATs) generally provide such
services as dispensing cash, receiving deposits, providing balance and account
information, and providing information about available banking services. These
systems typically operate 24 hours a day and require no on-duty personnel, other
than for regular servicing.

20 Home banking services and other personal computer (PC) banking
generally provide similar services to ATMs and CATs, and may also include other
services, such as electronic bill payment.

Human tellers and banking representatives generally provide non-
automated services, such as opening accounts, dispensing checks, readying bank
25 cards and credit cards, taking customer pictures for photocards, answering
questions, and dispensing other services. Tellers and other banking representatives
are generally accessible to customers during regular banking hours, which
generally correspond to or are less than regular business hours for other
businesses.

30 A problem presented by existing art is the lack of accessibility for
customers to non-automated banking services during non-banking hours (i.e., lack

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of 24-hour access to these services). Additionally, services that require human tellers and banking representatives are generally expensive relative to the costs of maintaining automated tellers. Therefore, costs may be prohibitive for providing non-automated services during periods of low customer traffic, such as late at
5 night or very early in the morning.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide from a remote location a range of banking services in conjunction with a broad range of network services.
10 It is an object of the present invention to provide a full range of banking services on an extended-hours basis. It is a further object of the present invention to provide video communication with a banking representative. It is a further object of the present invention to share information with a customer in a real time, collaborative mode. It is a further object of the present invention to provide
15 immediate printed and other information to a customer.

It is a further object of the present invention to provide scanning and other methods for immediate interaction between a customer and a remote banking representative. It is a further object of the present invention to provide remotely and immediately bank cards, credit cards, photocards, and related services. It is
20 another object of the present invention to provide remote imaging of a customer.

It is a further object of the present invention to provide a full range of banking information in conjunction with banking services. It is a further object of the present invention to provide a system for organizing a facility layout for performing automated, communications, and other banking and banking-related
25 functions.

To achieve the stated and other objects of the present invention, as embodied and described below, the invention includes a method for a user to obtain remotely provided banking services by accessing a first terminal having a screen, initiating communication with a service representative at a second
30 terminal, automatically prompting the user to select one from a group of performable banking functions, selecting a banking function from the group of

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performable banking functions, automatically prompting the user for additional information relating to the selected banking function, transmitting information relating to the selected banking function to the second terminal, processing the selected banking function, and the service representative assuring completion of the processed banking function. The above actions can be conducted by a user in a self-service mode, or the actions may be conducted by a remote service representative for a staff-assisted session.

To achieve the stated and other objects of the present invention, as embodied and described below, the invention further includes a walled facility; a welcome station located within the walled facility; an automatic teller machine within the walled facility and remote from the welcome station; and a remote service area for obtaining banking service from an external service area to the walled facility, wherein the remote service area is within the walled facility and remote from the welcome station and the automatic teller machine.

Additional objects, advantages and novel features of the invention will be set forth in part in the description that follows, and in part will become more apparent to those skilled in the art upon examination of the following; these features may also be learned by practice of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a general overview of the system elements of an embodiment of the present invention.

FIG. 1A presents a general overview of the system in operation for an embodiment of the present invention.

FIG. 2 contains the general system settings window for a graphical user interface (GUI) for an embodiment of the present invention.

FIG. 3 presents the audio/video settings window of a GUI for an embodiment of the present invention.

FIG. 4 shows the application settings window for an embodiment of the present invention.

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FIG. 5 is a window having server information for an embodiment of the present invention.

FIG. 6 shows the customer service representative (CSR) console window for an embodiment of the present invention.

5 FIG. 7 presents the folders for the CSR console window for an embodiment of the present invention.

FIG. 8 is the CSR session control window for accepting a call for an embodiment of the present invention.

10 FIG. 9 shows the CSR session control window after a session begins for an embodiment of the present invention.

FIG. 10 presents a window containing the CSR file menu for the CSR station for an embodiment of the present invention.

FIG. 11 is file transfer pop-up window for an embodiment of the present invention.

15 FIG. 12 is the file menu "Execute Remote Command" pop-up window for an embodiment of the present invention.

FIG. 13 presents the CSR edit menu window for an embodiment of the present invention.

20 FIG. 14 shows the CSR view menu window for an embodiment of the present invention.

FIG. 15 is the CSR pop-up window for "Show Errors" for an embodiment of the present invention.

FIG. 16 shows the help menu window for an embodiment of the present invention.

25 FIG. 17 presents a window for the advanced CSR panel for an embodiment of the present invention.

FIG. 18 contains a window showing the advanced customer panel for an embodiment of the present invention.

30 FIG. 18A contains a window showing the advanced transfer panel for an embodiment of the present invention.

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FIG. 19A is the window containing the advanced processes panel for an embodiment of the present invention.

FIG. 19B is the window of FIG. 19A in which an example of the user station process list is presented.

5 FIG. 20 shows the window for the advanced property panel for an embodiment of the present invention.

FIG. 21 presents the window for the CSR application panel for an embodiment of the present invention.

10 FIG. 22 contains the window for playing a movie for an embodiment of the present invention.

FIG. 23 is the window for the CSR clipboard application for an embodiment of the present invention.

FIG. 24 presents the window for the video banking MIS report program for an embodiment of the present invention.

15 FIG. 25 shows a video banking session report (infrastructure session) for an embodiment of the present invention.

FIG. 26 shows a video banking session report by CSR (CSR wise) for an embodiment of the present invention.

20 FIG. 27 shows a video banking session report by product (product wise) for an embodiment of the present invention.

FIG. 28 presents the home loan calculation window for an embodiment of the present invention.

FIG. 29 contains the window for investment product division (IPD) contents for an embodiment of the present invention.

25 FIG. 30 shows the money market account window for an embodiment of the present invention.

FIG. 31 presents the product information window for an embodiment of the present invention.

30 FIG. 32 is a sample window for the Brazil application GUI for an embodiment of the present invention.

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FIG. 33 is a flow diagram for the method of an Electronic Banking System (EBS) embodiment of the present invention for a prospective customer.

FIG. 34 presents the flow diagram for an existing customer for the method of an EBS embodiment of the present invention.

5 FIG. 35 presents a banking facility layout, including zones and areas, for an EBS embodiment of the present invention.

FIG. 36 presents a staging area layout for an EBS embodiment of the present invention.

10 FIG. 37 presents a staging area layout for another EBS embodiment of the present invention.

FIG. 38 presents a staging area layout for another EBS embodiment of the present invention.

FIG. 39 presents a staging area layout for another EBS embodiment of the present invention.

15 FIGS. 40A and 40B present two views of a mobile free-standing layout for another EBS embodiment of the present invention.

FIG. 40C shows a closeup of the welcome station for the embodiment presented in FIGS. 40A and 40B.

20 FIGS. 41A and 41B present two views of a mobile free-standing layout for another EBS embodiment of the present invention.

DETAILED DESCRIPTION

The present invention solves the problems of the existing art by utilizing automated functions and communication with a remote teller or other banking
25 representative to allow accessibility for customers to non-ATM/CAT banking services during non-banking hours. Additionally, the present invention allows provision of services that require human tellers and banking representatives and that are generally expensive relative to the costs of maintaining automated tellers. The present invention also includes a system for organizing a facility layout for
30 performing these automated and communications functions in conjunction with a

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wide range of other functions, such as ATM/CAT functions, information towers, phone banking, foreign exchange, PC home banking, and slimCAT functions.

An embodiment of the present invention is referred to as Video Banking System (VBS), and is also known as VideOffice. VBS is an element of an overall banking layout, referred to as the Mini Electronic Branch (MEB). Another
5 embodiment of the present invention is referred to as the Electronic Banking Shop (EBS). Each of these embodiments is described in more detail below.

VBS Embodiment

10 An embodiment of the present invention is a PC based two way video product that provides video session capability with application collaboration between a Customer Service Representative (CSR) and a remote user (e.g., customer; potential customer). The session is conducted by the CSR as if the CSR were having a face to face conversation with the user in the CSR's office. The
15 following are system highlights of an embodiment of the present invention.

An embodiment of the present invention provides a "face-to-face" session between a user and a remote CSR. The user station and the remote CSR station are connected by, for example, an Integrated Services Digital Network (ISDN) line or Ethernet LAN. An embodiment of the present invention is PC based and
20 housed in a Kiosk or on the desktop.

In an embodiment of the present invention, the Virtual Office model is CSR driven, in which the user confirms the CSR's actions. The user initiates a session to a remote CSR by touching the touch screen or using a keyboard or keypad in the user station, after which the CSR manages the session based on the
25 user's business needs.

In an embodiment of the present invention, devices (e.g., scanners, printers) located locally or remotely are controlled by the CSR. Hard copy reports are printed at the remote customer site. Documents are scanned remotely and viewed at both the CSR site and the customer site. Promotional pre-recorded multi-media
30 presentations are played at the customer site. Various business applications are

invoked to fulfill a customer's requests, such as account opening form preparation, loan applications, and financial planning.

In an embodiment of the present invention, the Video Banking System is a PC based system that utilizes off the shelf Video Compression and Decompression
5 (CODEC) hardware to provide a two-way video session. An embodiment of the present invention is configured for the desktop, and another embodiment is configured for a variety of Kiosk environments.

The VBS infrastructure provides capabilities to control audio, video, document camera, scanner, and printer devices, as well as to play promotional
10 movies, display forms, and provide for electronically assisted completion of forms.

In an example user session for an embodiment of the present invention, a user initiates a video session by previewing given choices or a welcome screen with an attractor loop. The CSR then controls the video session by interviewing and selling the customer appropriate business products. If for some reason the
15 session is interrupted, the system provides the capability for the CSR to call the customer back to resume the session. When business with the customer is complete, the CSR terminates the session.

The VBS software infrastructure provides generic capabilities to perform basic CSR functions required for conducting a session with a remote Customer.
20 The following is a summary of the major functions included as part of the infrastructure for an embodiment of the present invention: 1) filling out forms collaboratively; 2) playing videos and other multimedia files; 3) providing Smart Forms (to simulate "what if" scenarios; for example, loans with different rates, installments, and so forth); 4) showing promotional slides; 5) providing clipboard
25 capability; 6) transferring files; 7) creating forms; 8) controlling devices, such as a scanner, printer, audio, video, and camera, from a remote location; 9) creating MIS reports; 10) accessing the Internet with remote Video Banker navigation; 11) reading smart cards; and 12) providing a signature pad.

In an embodiment of the present invention, the application platform makes
30 extensive use of the object oriented (e.g., Microsoft OLE, produced by Microsoft Corp. of Redmond, WA) technology. This functionality is provided by the

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operating system. Another embodiment utilizes off the shelf object oriented and other components, such as Microsoft's ActiveX components.

The following are highlights of the OLE technology element of the system. The system is designed using OLE Automation technology with OLE servers and
5 OLE clients. The system is Event Driven, in which users register to receive events. Several OLE components are combinable into single executable functions. The OLE components are distributed between local and remote machines. In an embodiment of the present invention, the OLE components have a graphical user interface (GUI). OLE components are launched on demand as users refer to them.

10 A general overview of selected components of the VBS embodiment of the present invention are as follows. Servers -- An OLE server provides specific functions/services, which are invoked by a requesting Client application. An OLE server is started automatically upon the request of an OLE Client application. A server is used by more than one user simultaneously. Client Application -- An
15 OLE Client application uses one or more OLE server services to provide functionality.

The infrastructure of an embodiment of the present invention includes servers that provide common system functions such as session management, audio functions, video functions, data channel management, environment context
20 management, and system audit logging of session information. The client applications provide the basic VBS system functions, including form filling, presentation of promotional multi-media material, clipboard capabilities, such as cut and paste, and file transfer.

The following is a system overview of the elements of the CSR and user
25 sites. Stand up and sit-down hardware configurations of the user site are supported, as well as desktop and Kiosk environments. These elements include, for the CSR site: 1) one CSR station -- a terminal, such as a PC, server, or main frame, with sound card, camera, and speakers; 2) two-way video CODEC; 3) ISDN connection support; 4) network connection for Internet support; 5) a printer;
30 6) a scanner; 7) a second monitor for external video display; and 8) a TelePrompTer.

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The remote Video Banker conducts the Video Banking session as if the CSR were having a face-to-face conversation with the customer or other user. The user at the VBS Video Banking Booth speaks to subject matter experts, such as Investment or Mortgage Consultants, and views the same information as the expert or remote CSR. Data entered by the remote CSR on an application form is confirmed by the user instantly. The integration of a scanner and a printer complete the interaction, which duplicates a face-to-face interaction at a branch.

The Video Banking software infrastructure provides capabilities for performing remote Video Banker functions required to conduct a session with a customer or other user remotely. In addition, the infrastructure provides generic capabilities and facilities for banking or other financial institutions or other businesses to customize and produce their own forms and create their own content flow.

The Video Banking Front-End (customer side of the Video Banking session) is configured with the following components for an embodiment of the present invention: 1) a terminal, such as a PC, with a video card, sound card, network card, and CD-ROM; 2) one device server, such as a PC; 3) a two-way video CODEC; 4) an Operating System (such Windows 95™ or Windows NT); 5) a wide-angle video camera; 6) amplified stereo speakers; 7) scanner; 8) microphone or telephone; 9) laser printer; 10) extended paper tray; 11) a coupling, such as ISDN connection support; 12) a network coupling, such as a connection for Internet support; 13) a second camera for viewing customer side; and 14) a second, 15-inch screen.

With the second screen on the Front-End system, the video image of the remote Video Banker appears on the top screen, and the data and forms appear on the lower screen. This two-screen setup means that the user views a larger image of the remote Video Banker during the entire session.

In an embodiment of the present invention, the layout of the Video Banking Front-End is arranged in one of the following configurations: 1) desktop; 2) open booth; or 3) enclosed booth for one or two people. The desktop arrangement is used in scenarios where space limitations prohibit the installation of a booth, or if

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an enclosed area already exists (e.g., office/conference room). The desktop embodiment is arranged in an office or conference room environment for privacy while accessing a remote location Video Banker or specialist.

5 The open booth embodiment is used, for example, in a branch setup to offer privacy to the user without using a fully enclosed booth. A mobile screen panel behind the user, for example, provides a sense of privacy.

For optimum privacy, in an embodiment of the present invention, an enclosed booth is used in the VBS. An additional advantage of the enclosed booth is that it is installable in nonbranch environments, such as malls or airport lounges, providing privacy to the customer in these environments.

10 The Video Banking Back-End, where the remote Video Banker (CSR) and experts reside, is the designated, centralized Sales/Service Call Center. With appropriate call center technology, the Video Banking Back-End is integratable with other elements of a business, such as audio calls. Thus, with this embodiment, a few trained remote Video Bankers are able to handle video calls as well as audio calls.

In addition to handling video calls originated in Video Banking booths in the VBS, the Call Center handles calls generated by customers and prospects through the Internet.

20 The Back-End configuration includes the following hardware components:
1) a terminal, such as PC, with video card, sound card, network card, and CD-ROM; 2) a two-way video CODEC; 3) an operating system; 4) a video camera; 5) amplified stereo speakers; 6) scanner; 7) microphone or telephone; 8) laser printer; 9) extended paper tray; 10) a coupling, such as an ISDN connection support; and
25 11) a network coupling, such as a connection for Internet support.

In an embodiment of the present invention, the electronics/technology components of the VBS include the following: 1) Video Banking Booths -- integrated two-way video equipment, including a PC, a touchscreen monitor, a scanner, a laser printer, a microphone/telephone, speakers, and a camera; 2)
30 Welcome Station electronic components, including a Customer Identification Terminal (PIN Pad), bank card embosser device, host connection terminal, printer,

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and telephone/fax machine; 3) phone banking device; 4) ATMs or CATs; 5) information towers -- multimedia information towers with an optional card reader and printer; 6) Home Banking Kiosks -- standard off-the-shelf PCs with typical home and/or office configurations loaded with home banking software; 7) 5 checkbook dispensing station; 8) projection display panel; and 9) travelers checks/foreign exchange station.

An embodiment of the present invention includes a PC-based, two-way video product that provides video session capability with application collaboration between a user sitting at a Video Banking Booth in the VBS and a remote Video 10 Banker at a centralized Sales/Service Call Center.

The Video Banking system has three basic communication modes. LAN connectivity is used when the customer Front-End and remote Video Banker Back End are located within the same physical premises. An example is a booth located in the lobby of a headquarters building, which also houses the remote Video 15 Banker Sales/Service Call Center.

Single Basic Rate Interface (BRI) or triple BRI (3BRI) ISDN connectivity is suitable for a typical single-screen Video Banking session, in which a small video image of the remote Video Banker is displayed in one corner of the screen, and the forms and data appear on the remainder of the screen.

20 Triple BRI ISDN connectivity is also used in conjunction with a dual Video Banking system, in which the top screen contains the video picture of the remote Video Banker, and the lower screen is used for data forms and data display. This mode is necessary for the two-screen version and recommended for the one-screen version due to the increase in quality.

25 In an embodiment of the present invention, the Video Banking configuration has a point-to-point connection between the customer Video Banking Front-End and the remote Video Banking Back-End. This point-to-point connection is via a LAN or ISDN line. In this scenario, there is no need for advanced call center functions, such as call transferring, call back, reroute on call 30 busy, and so forth.

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Another embodiment of the present invention has a more robust Video Banking configuration, consisting of many Front-End systems communicating to a smaller number of Back-End systems. This Private Bank Exchange (PBX) type configuration requires an Automatic Call Distribution system that offers the
5 following features: 1) automatic call distribution functions; 2) answering service; and 3) security.

Automatic call distribution functions further include: 1) call transfer -- transfers a call from one remote Video Banker to another; 2) support of a Virtual Call Center -- two remote Video Bankers are located at physically separate
10 locations, transparent to the customer; 3) call screening; 4) call back -- the remote Video Banker in the Back-End calls the customer Front-End (normally, a video call is initiated from the Front-End to the Back-End); and 5) reroute on call busy.

Answering Service includes: 1) video mail and voice mail; 2) interface to Automated Voice Response (AVR) systems; 3) video call on hold; and 4) ability to
15 put the customer into a video stream.

Security includes: 1) MIS reporting on sessions; 2) call screening with user ID; 3) call back with user ID; and 4) data encryption.

Some of the multimedia call management features offered by this systems are: 1) multimedia automatic call distribution capabilities; 2) multimedia call
20 redirection; 3) multimedia (voice; voice and data; voice, data, and video from point-to-point and/or Internet) hunting, which includes a second call to the same agent and uniform call distribution; 4) multimedia call conferencing; and 5) multimedia communications efficiency, which includes one member calling for both voice and multimedia calls and multimedia call forwarding.

25 If a potential customer entering the VBS already has a relationship with the bank, the Customer Identification Terminal located at the Welcome Station in the VBS provides a quick and simple means for bank officers to profile the customer, discerning their needs and understanding the potential cross-sell opportunities.

The Customer Identification Terminal is also used by the VBS bank officer
30 after a Video Banking session to have the newly-acquired customer enter the PIN number of their choice with their newly-issued bankcard.

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In an embodiment of the present invention, the Customer Identification Terminal has a swipe card reader capable of reading two out of the three tracks on a magnetic stripe card. Security features available on the card reader device are PIN encryption, message authentication, and key management.

5 Although it is used primarily for reading bank cards within the VBS, in an embodiment of the present invention, the card reader device accepts debit, credit, and private label card transactions; process Stored Value Card (Smart Card) transactions for four or more Stored Value Card schemes; and capture customer loyalty transactions -- all in a single terminal. Additional features include a larger
10 backlit display, graphics capability, enhanced keyboard, multiple connectivity options, and an optional integrated modem.

The specifications for an embodiment of the present invention for the Customer Identification Terminal are as follows: 1) a processor; 2) Intellect Secure Architecture; 3) keyboard (tactile); 4) magnetic card reader; 5) Customer
15 Smart Card reader/writer; 6) Smart Card reader/writer; 7) real-time clock; and 8) multiple communication interfaces.

In an embodiment of the present invention, the Welcome Station contains a terminal for access to the business' host system, depending upon the type of Back-End host system used. The typical terminal is a standard desktop PC, which has
20 the proper communications connectivity with the host, as well as the applications bank officers use for gathering information about customers.

In an embodiment of the present invention, the greeter is capable of opening a new account and screening existing customers. In an embodiment of the present invention, the greeter is able to perform some teller functions.

25 Phone banking devices, such as CitiPhone® Towers, are in-branch telephone kiosks that allow connection of customers directly to a local Country Service Center. In the VBS, phone banking devices are located within the transaction zone. The following are the technical features and functions of phone banking devices: 1) standard telephone connection with a direct link to a user; and
30 2) 24-hour, 7-day a week access.

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The VBS contains a variety of ATMs that process transactions ranging from very basic cash withdrawals to more complicated CAT transactions involving bill paying and trading stock. Since the VBS does not have a teller, the more functions the ATM performs, the smaller the gap between the VBS and the
5 traditional branch.

Information Towers are browser-like, interactive, contemporary-design kiosks used for providing marketing and/or product-related information to customers. Interaction at the Information Towers is via touchscreen. Users search for information about products and services, or find out the location of various
10 bank branches via direct link to the country-specific Web page.

Each business chooses the type of information to show in the Information Tower. Some businesses have cross-merchant offers (for example, a VBS in a mall) and others have a multimedia presentation orienting the customer to the VBS itself.

15 Several manufacturers exist in the marketplace that offer an Information Tower with similar technical features, including: 1) high-tech appearance, using minimal footprint and offering mobility; 2) PC engine; and 3) a flat panel color LCD display.

In an embodiment of the present invention, the system uses an Information
20 Tower that incorporates an accessory arm to provide magnetic stripe card reading and receipt printing. The Information Tower of this embodiment has the following technical features: 1) PC engine; 2) keyboard and mouse controller; 3) motion detector; 4) sound card; 5) ethernet connection; and 6) flat panel color LCD display.

25 The purpose of the Home Banking Kiosks within the VBS is to introduce the bank's Home Banking product to the customers, demonstrate its functionality in a tutorial mode, and show the customer or other user how to install and use it. In addition to using the Home Banking Station as a demonstration device, in an embodiment of the present invention, the kiosk is connected to the host, allowing
30 customers who are more comfortable with home banking to perform those functions.

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In an embodiment of the present invention, the Home Banking Kiosks are standard PCs sitting on a platform. An embodiment of the present invention includes the GRAIL home banking user interface design. An embodiment of the present invention uses an intelligent system that connects to a regular TV set and gives customers and other users most of the functionalities of a regular PC at a much lower price.

Children's (children of customers and prospects) PCs, such as CitiKids, are located within the Screening, Information, and Traffic Direction zone to attract and entertain children, allowing the parents to speak with the VBS bank officer.

The features of the children's PCs include the following: 1) a PC loaded with children's type software (e.g., games, educational); 2) colorful, playful desk/chair area; 3) monitor frame and mouse pad with a children's PC theme; and 4) regular mouse for older kids and a special trackball mouse for smaller kids.

In an embodiment of the present invention, the card embosser device is capable of issuing high-quality ATM, debit, and credit cards in a matter of minutes. The card embosser delivers ready-to-use cards in a fast, single-pass operation. Standard features include embossing, magnetic stripe encoding, and color topping, with optional indent printing and Smart Card personalization.

In an embodiment of the present invention, the card embosser offers several security features to help guard against card theft and fraud. In an embodiment of the present invention, for physical security, a user's application defines a password that is entered from a keyboard to unlock the chassis cover. All entries are recorded on a host audit trail to protect the card stock.

The card embosser is also programmed to recognize financial card formats.

A password is required from the host to allow production of financial cards. The system also offers standard magnetic stripe encoding and optional Smart Card Personalization capabilities. The following summarizes additional features of the card embosser: 1) smart card personalization; 2) indent printing (front or rear); and 3) choice of topping foil colors: black, gold, silver, red, white, dark blue, or process blue.

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In an embodiment of the present invention, the Checkbook Dispensing Station is connected to a SlimCAT. In another embodiment of the present invention, a standalone Checkbook Dispensing Station is used. The functions of the checkbook printer include the following: 1) encodes the MICR or optical code line to International Standards Organization (ISO) standards; 2) reads and verifies the quality/accuracy of the encoded line; 3) automatically rejects, cancels, and perforates non-standard checks; 4) text prints all personalized information, including check number, sort code, branch address, account number, customer name, and so forth; 5) collates the completed checkbook of 10 to 20 checks; 6) staples and binds checkbook to a professional standard and cloth finish tape; and 7) presents the finished book. A checkbook not taken by a customer within a given time is automatically withdrawn and deposited in a locked security box.

For an embodiment of the present invention, the Checkbook Dispensing Station contains a PC and interfaces with a host computer via serial ports. With the online configuration between the Checkbook Dispensing Station and the host data base, "tailor-made" checkbooks for customers are issuable at any branch.

Checkbook Dispensing Stations have many built-in, self-diagnostic functions that check for correct feeding of stock and functioning of the printers. The stations check for double feeding, upside down/wrong way loading, encoder ribbon and binding tape exhaust conditions, and so forth. Error messages are transmitted from the Checkbook Dispensing Stations to the host, enabling quick identification of malfunctions and immediate corrective action.

The projection display panel is a convertible front and rear projection television and computer monitor that utilizes equipment such as Digital Light Processing™ (DLP) technology from Texas Instruments, of Austin, Texas.

In an embodiment of the present invention, the projection display panel is the Digital Home Theater™ projection television from Projectavision™ of New York, New York. The system displays the Pointcast product from the Internet. In an embodiment of the present invention, an Internet provider is used to eliminate the need for content maintenance, since the video is refreshed continually.

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In an embodiment of the present invention, the system includes Traveler's Checks/Foreign Exchange Stations to enable users to buy and sell different kinds of currencies.

References will now be made in detail to sample GUI screens for the VBS
5 embodiment of the present invention, an example of which is illustrated in the accompanying drawings.

FIG. 1 presents an overview of the elements of an embodiment of the present invention. As shown in FIG. 1, the CSR station for an embodiment of the present invention includes a two-way video PC 10, with attached speakers 11, a
10 video camera and microphone 12, a monitor 13, a printer 14, keyboard 15, mouse 16, LAN/WAN connections 17, and NT-1 ISDN terminators 18 for interface with ISDN lines 19.

As shown in FIG. 1, the user station for an embodiment of the present invention includes a two-way video PC 25, with attached speakers 26, a
15 touchscreen monitor 27 a second monitor 28, microphones and cameras 29, a scanner 30, a device server 31 with attached printer 32, LAN/WAN connections 33, and NT-1 ISDN terminators 34 for interface with ISDN lines 35. In an embodiment of the present invention, the CSR station and the user station are connected 36, such as by an ISDN line.

20 For the user site, the elements of the printer station include: 1) a terminal, such as a PC; 2) a printer; and 3) an extended paper tray.

A configuration management utility application is utilized in an embodiment of the present invention to configure the CSR station or the user station. The utility updates a two way video access database, which is utilized by
25 the VBS system. The utility provides the capability to preview or print the contents of this database.

The management utility application consists of tabbed control panels that are categorized based on their functionality, as follows. General settings --
contains general information required by the system. Audio-Video settings --
30 contains audio and video device settings. Application settings -- contains path and

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file names for application media options used. Servers -- contains runtime information for application servers displayed in the application control panel.

The management utility application Optional Devices indicate the presence of a scanner and printer device and their resolution. Screen settings -- sets the standard screen size and location for all the application screens. Data clean up interval -- this setting indicates the frequency in days for which the system performs the cleanup of audit log files and temporary files. Application settings -- contains path and file names for application media options used, as shown in FIG.2, below.

FIG. 1A presents a general overview of the system in operation for an embodiment of the present invention. In FIG. 1A, a user 35 at a terminal 36, such as a PC, communicates 37 via a network 38 with a CSR 39 at a second terminal 40. Communication is by two-way video, which includes a video camera 41 at the user station and a second video camera 42 at the CSR Station. Also, the user station includes such things as a signature pad 43, a printer 44, a card reader 45, and a scanner 46. A second terminal 40 can access information from a third terminal 47 and project the information onto both the first terminal 36 and the second terminal 40.

FIGS. 2-32 contain example windows from a windows-based GUI for an embodiment of the present invention.

FIG. 2 presents a window 50 containing various functions for general system settings of a user station. As shown in FIG. 2, the window 50 contains different options selectable for each of the menu buttons 51-54. These menu buttons include general 51, audio-video settings 52, application settings 53, and servers 54. The selection for general 51 allows input into boxes for workstation identifier 60, CODEC type 61, and call size 62, a selection 63 for user station or CSR station, and inputs for user station phone numbers 64, CSR station phone number 65, optional devices 66, screen settings 67, and data cleanup interval 68. Also, at the top of the window 50 is a pulldown menu for file 69.

In FIG. 2, if the user selects the menu button for audio visual settings 52, additional input appears for audio-video settings, as shown in FIG. 3. These

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settings include boxes for audio 70, video 71, and video window image 72. Within the audio box 70, the options for input device 70a include microphone, headset microphone, telephone handset, linelevel input, and auxiliary input; the options for output device 70b include speaker, headset ear phones, telephone ear-piece, line level output, and auxiliary output. Within the video box 71, the options for input device 71a include camera, VCR, and camera2; the options for output device 71b include single screen overlay and screen on external monitor.

In FIG. 2, if the user selects the menu button for application settings 53, additional input appears for applications settings, as shown in FIG. 4. This input includes main heading for application forms 75, default CSR name 76, and boxes for images 77, promotional movies for greeter 78, directories 79, and snapshot program 80. Further details about these applications are as follows.

Main heading --the main heading to appear as a caption on each application screen. Default CSR name -- sets the name of the CSR; used by applications. Background Images -- defines the background image to be used for the Greeter application screen and then for the common screen background during a session.

Promotional Movies for greeter -- the first movie is played while disconnected; in an embodiment of the present invention, a second movie is shown during the connection set up.

Directories -- these are the directories where different files are stored; for instance, Forms directory is for storing forms, Media is for storing bitmaps (.bmp) and movie files (.mpg, .avi), and TEMP is used as the default destination directory for files being transferred.

Snapshot program -- provides the full path of the snapshot program used to capture remote site screens.

In FIG. 2, if the user selects the menu button for servers 54, additional input appears for servers, as shown in FIG. 5. This input includes column boxes for server name 85 and server class 86, a box for new server information 87, and buttons to add 88 or delete 89 a server.

FIG. 5 shows the application servers installable and runnable by the CSR. After the CSR station has been rebooted, the CSR logs on to the system with a user

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I.D. and password. Then, the CSR double clicks on the TWConsole (.exe) icon to start the TwoWayVideo console program so as to set up the CSR station to wait for a call from the user station. The Console application enables the CSR to perform such functions as accept/hangup a call, activate/terminate Business applications, manage remote scanning devices, transfer files, and take a snapshot of the customers screen.

The CSR console includes two sections: the upper section is the application panel; and the lower section is the control panel. The appearance of the CSR console after the console program is started initially is shown in FIG. 6.

10 A window 100 includes pulldown menus for file 101, edit 102, view 103, launch 104, and help 105. Available files and folders icons are in a box 106. In the example shown in FIG. 6, an icon is available for video banking system 106a. The CSR may input or change settings regarding status 107 and CSR name 108; buttons are available for dial 109 and hangup 110, and boxes allow input or change

15 of information regarding CSR 111 and customer 112.

The paradigm is that the "Video Banking System" drawer consists of folders that contain applications (items) that the CSR activates as the session with the user progresses. An application is activated, used and then closed: if required, multiple applications are opened and used.

20 In FIG 6, if the video banking system icon 106a is selected, a "+" symbol appears preceding the folder, indicating that this is a compressed folder. For a compressed folder, either its "+" sign is clicked on once, or the folder name is double clicked, after which the folder expands showing all its items and the "+" symbol in front of the folder changes to the "-" symbol, as shown in FIG. 7. FIG.

25 7 also presents the expanded folder for the video banking system icon 106a. The expanded folder includes Brazil contents 106c, demo applications 106d, movies 106e, promotional programs 106f, and tools 106g.

Conversely, when the CSR clicks on the "-" sign of an expanded folder, the folder is compressed so that its items are not displayed, and the folder is then

30 preceded by the "+" symbol.

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After the connection is accepted by the CSR, the CSR starts/launches appropriate applications depending on the user's needs/interests. For example, a CSR opens an account opening application form and partially completes it; simultaneously, the user's identification card is scanned via the clipboard application of the Tools folder. Then, after completing the form and printing it at the user site, the CSR terminates the application.

A call is initiated from the user station as the result of a customer touching the touch screen of the user station. About five seconds later, a tiny ring sound is heard on the CSR station, indicating that the call has arrived; then about 25 seconds later, the status of the CSR's console starts changing from 'Disconnected' to "Call Coming", "Connected", and finally "Ready at 382K" (if, for example, the call is a LAN connection or a 3BRI ISDN connection). Then, some phone rings sound, while a RED "Ready" button 115 appears immediately below the Dial/Hangup buttons, as shown in FIG. 8.

After the CSR clicks on the red Ready button to accept the call, the Ready button disappears, the user's Visible box is checked, and then the actual two-way video session begins (i.e., both the CSR and the user see and hear each other).

The whole process, starting from a touch on the user station's screen, until the red Ready button 115 is displayed, takes about 30 seconds. About 15 seconds after the call is initiated, the CSR is able to hear the user. In an embodiment of the present invention, at the same instance, the user hears the CSR for a few seconds, as a result of using the CODEC driver. To circumvent this problem, the VBS infrastructure is programmed to mute the CSR's audio once every second within this period, so that only broken sentences are heard by the user. If this situation is still not acceptable to the CSR, since the CSR is using the built-in microphone of the camera, then the CSR switches off the camera after each session, and turns on the camera before accepting a call. After the session is made, the CSR console appears as shown in FIG. 9. Note that within the customer box 112, indication now appears that the customer is visible 112a.

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If the CSR's name differs from the default name, the CSR clicks on the "CSR Name" field to enter their own name so that the MIS reports are generated with accurate CSR names.

On the regular control panel, the following basic adjustments are made to affect the CSR station; these adjustments are made by clicking on the corresponding field of the CSR frame, as follows. Visible: makes the image window, containing user's image, visible on the CSR station. PIP: makes a small picture in picture (PIP) appear on the CSR station so that the CSR can view itself. Mute: turns on the mute of the CSR's audio so that the user isn't able to hear from the CSR. This feature is helpful, for example, when the CSR puts the user on hold while the CSR is discussing an issue with a supervisor or colleague. This toggle switch can be click on again to turn off the mute. Microphone: adjusts the input level of the CSR's microphone. The CSR clicks on the final desirable level position rather than dragging the level mark to the final location. Speaker: adjusts the output level of the CSR's Speaker. The CSR clicks on the final desirable level position rather than dragging the level mark to the final location.

On the regular control panel, the following basic adjustments are available, which affect the user station by clicking on the corresponding field of the user frame, as follows. Visible: makes the image window, containing CSR's image, visible on the user station. Mute: turns on the mute of the user's audio so that the CSR isn't able to hear from the user; this toggle switch is clicked on again to turn off the mute. Microphone: adjusts the input level of the user's microphone; the user clicks on the final desirable level position rather than dragging the level mark to the final location. Speaker: adjusts the output level of the user's speaker; the user clicks on the final desirable level position rather than dragging the level mark to the final location.

In an embodiment of the present invention, the launch/application folder section of the CSR's console includes the applications that the CSR is able to execute to perform user session requirements. The applications are grouped into categories by folder. Each folder contains the specific item/application. To

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execute the application. the CSR selects the item by clicking over it and clicking the *Launch!* Menu option.

An application is terminated as follows: if there exists an "Exit" or "Done" button, the user clicks on the button; otherwise, the user clicks on the "x"-button at the upper right corner of the application's main window; in addition, in some cases, the user can double click the top left corner of the application's main window.

Once a session is connected, the CSR hangs-up to terminate the session by clicking on the Hangup button. If the session is interrupted, the CSR dials the user to resume the session by clicking on the dial command button.

As shown in FIG. 10, the CSR Console menu bar provides easy access to the commonly used infrastructure functions. There are five dropdown menu groups in the CSR console 100: File 101, Edit 102, View 103, Launch 104, and Help 105. To start a function within a menu group, the CSR first clicks on the desired menu group, then waits for the drop down menu to be displayed. The CSR then simply clicks on the desired function on the menu. CSR Console menu groups and their corresponding functions are described further below. Note that in order to perform certain CSR console functions, such as update item or view processes, the CSR must have administrative privileges (i.e., the TWConsole must be started with the "admin" as the first argument ("TWConfig admin")).

As shown in FIG. 10, the CSR has the option to use the file menu 101 to transfer a file 120, execute a simple console command (which does not prompt the user at all) remotely on the user's station 121, reboot a user station 122, enable the user station's touch screen 123, center and enlarge the CSR's image 124, shrink and move the CSR's image to the default top right corner of the user station's monitor 125, release a file transfer lock 126, share an application 127, reset the data bandwidth to default values 128, lock the CSR's monitor 129 (note that the CSR's system can be set up with a screen saver that is protected by a password, so that the CSR's monitor requires the password to unlock the screen), and terminate the console program (Exit) 130.

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By default, the user station's touch screen is disabled. The CSR can click on the user screen enabled menu item 123 to enable the user station's touch screen: a check mark then appears next to this menu item. If the CSR clicks this menu item again, the user station's touch screen disables again, and the check mark
5 disappears.

In FIG. 10, if the CSR selects transfer file 120 from the edit menu 101, a transfer file pop-up window 135 appears, as shown in FIG. 11. The window 135 includes input areas for transfer 136, file type 137, and destination directory 138, and buttons for send file 139, done 140, and "... " 141. The file type 137
10 selections include application, media, and other. Selecting the button for "... " 141 allows the CSR to browse directories to select a target file. Once a target file is selected, the CSR selects the send file button 139 to transfer the file to a user station. The CSR selects the done button 140 to end the transfer process.

In FIG. 10, if the CSR selects execute remote command 121 from the edit
15 menu 101, a pop-up window 145 appears, as shown in FIG. 12. The window 145 includes areas to enter a command for remote execution 146 and for providing command results 147, as well as buttons for clear 148, cancel 149, execute 150, save 151, and done 152. After a simple windows console command is typed into the command line 146, the CSR selects the execute button 150 to execute the
20 command remotely on the user station. The corresponding results are displayed in the command results area 147. The contents of the command results area 147 are savable as a file using the save button 151; and the clear button 148 clears the command line 146 and command results area 147. The done button 152 exits the CSR from the pop-up window 145.

25 FIG. 13 presents the pulldown menu for edit 102 from the CSR console window 100. The menu items within the edit selection 102 include add item 155, update item 156, delete item 157, add group 158, update group 159, and delete group 160. An entitled CSR invokes the edit menu 102 to perform the operations on the application properties regarding groups and items within groups. The CSR
30 selects add item 155 to add a new item to the current folder, selects update item 156 to update the current item, selects delete item 157 to delete the current item.

The CSR selects add group 158 to add a folder, selects update group 159 to update the current folder, and selects delete group 160 to delete the current folder.

FIG. 14 presents the pulldown menu for view 103 from the CSR console window 100. The menu items within the view selection 103 include refresh tree
5 view 165, refresh call detail 166, control panel 167, control panel (advanced) 168, hide control panel 169, and show errors 170. The view menu 103 option enables the CSR to refresh the tree view of applications shown in the applications control panel, to refresh the call detail information, to toggle and hide/show the control panel, and to show logged errors.

10 If the CSR selects show errors 170 from the pulldown menu for view 103, a pop-up window 175 appears as shown in FIG. 15. In FIG. 15, the pop-up window 175 includes a message area 176, buttons for clear list 177 and hide 178, and a maximum messages area 179.

The CSR selects the *launch!* menu 104, as shown for example in FIG. 14,
15 to execute an application for an item that the CSR has selected from the application control panel outline tree. To launch, the item is highlighted and then the launch! menu item 104 is selected.

FIG. 16 presents the help pulldown menu 105 from the CSR console window 100. In an embodiment of the present invention, the menu items within
20 the help selection 105 include video banking system 185, with subselections for brazil contents 186, demo applications 187, movies 188, promotional programs 189, and tools 190.

The CSR advanced control panel (view menu 103 selection for control panel (advanced) 168, as shown in FIG. 14) includes the following: 1) CSR panel;
25 2) user panel; 3) transfer panel; 4) processes panel; and 5) property panel. The CSR manages a session by accepting a call to start a session and by terminating the session by hanging up the call. FIG. 17 presents the CSR control panel 195, which contains panel selection buttons for CSR 200, customer 201, transfer 202, processes 203, and property 204. Within the CSR panel 200, as shown in FIG. 17,
30 the window includes status 205, phone number 206, and boxes for video 207, audio 208, and data 209. Video 207 controls video quality type, video visibility,

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and self view (PIP). Audio 208 controls audio quality type, volume of microphone and speakers, echo-cancellation, and autogain properties. In addition, if mute is selected, the CSR side is muted, preventing the user from hearing what the CSR is saying. Data 209 controls the data bandwidth.

5 In FIG. 17, if the CSR selects the Customer panel button 201, a panel appears in the window 195, as shown in FIG. 18. This panel includes status 210, phone number 211, and boxes for video 212, audio 213, and data 214. The functions for this page are the same as those for the CSR control page, as shown in FIG. 17, except that the CSR controls the user station settings.

10 In FIG. 17, if the CSR selects the transfer button 202, a panel appears in the window 195, as shown in FIG. 18A. This panel includes status 215 and last file 216.

In FIG. 17, if the CSR selects the processes panel button 203, a panel appears in the window 195, as shown in FIG. 19A. This panel includes boxes for
15 CSR 220 and customer 221, and buttons for refresh 222 and terminate 223. With this panel, the CSR obtains a list of processes that are running on both the CSR and the user side systems. The CSR can select a refresh function 222 to update the process lists. Additionally, the CSR can selectively terminate a process by clicking on the process (server) and then selecting the terminate button 223. In an
20 embodiment of the present invention, some default servers can be displayed but cannot be terminated, such as SessionServer, VideoServer, AudioServer, DataChannelServer, FileTransferServer, TWConsole, TWGreeter, and AppLaunchServer. FIG. 19B presents the processes panel with data in the CSR box 220 and customer box 221.

25 In FIG. 17, if the CSR selects the property panel button 204, a panel appears in the window 195, as shown in FIG. 20. This panel includes input areas for group 225, description 226, server 227, and arguments 228, and buttons for OK 229 and cancel 230. The panel provides the CSR with information about the application group and item. A CSR with administrative privileges can add a new
30 group and a new item for the group. Items and groups can also be updated or

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deleted. To operate with administrative procedures, the CSR launches the console with the "admin" as a command line option.

FIG. 21 presents the CSR application panel 100. In an embodiment of the present invention, folders within the window 106 include video banking system, which contains folders that include Brazil contents 106c, demo applications 106d, 5 movies 106e, promotional programs 106f, and tools 106g, and other subfolders. The sample Brazil application 106c is used as a tool to test the VBS infrastructure software.

The demo application folder 106d includes the following items: 1) 10 Australia rotating logo; 2) bank in the sky; 3) bank mortgage form; 4) global asset management movie; 5) home loan (calculate the monthly payment based on the what if situation); 6) investment product division contents (slide show); 7) money market account opening form; and 8) product information about the bank.

The movies folder 106e includes the movie server menu, which is launched 15 to play a given movie file. A pop-up window for playing a movie is shown in FIG. 22, which includes a box for information 225, and buttons for play movie 226, stop movie 227, exit 228, and "... " 229. To select to show a movie, the CSR browses using the "... " button 229 to select a movie file. The selected movie is then played by selecting the play movie button 226. Movie files can be transferred 20 to user stations by the CSR for playing by users.

The promotional programs folder 106f contains promotional programs.

The tools folder 106g contains the following clipboard related functions: 1) capture user screen; 2) clipboard menu; 3) scan local; and 4) scan remote. After the capture user screen is launched, the clipboard application runs on both the user 25 station and the CSR station; then the user station's screen is captured and displayed on the side.

The clipboard menu allows the CSR to launch the clipboard server application to select the CSR's preferred clipboard function, as follows: 1) display and print text and pictures at the user site; 2) rotate the scanned image (by 30 increments of 90 degrees); 3) send an image file and display it at the user site; 4) capture and view the user workstation screen; 5) scan and view the user's

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document at the CSR site and user site; 6) scroll the scanned image; and 7) capture a video snapshot of the user and display it on the CSR's screen.

FIG. 23 presents a sample screen 240 of the Clipboard application with its command buttons. The elements of the sample screen 24 include a viewing area
5 241, a menu of CSR functions 242, a menu of user station functions 243, and an exit button 244. The CSR functions 242 include scan 242a, open 242b, paste 242c, save 242d, print 242e, clear 242f, rotate 242g, and send to customer 242h. The user station functions 243 include snap shot 243a, print 243b, capture screen 243c, and scan document 243d.

10 The clipboard functions are accessible via the command buttons of the CSR and Customer groups. The CSR clipboard functions include the following. Scan -- this button is only enabled if the CSR is configured with a scanner; it enables the CSR to scan a document locally. Open -- enables the user to view a file in the user window. Paste -- enables the CSR to paste the content of his current Windows
15 clipboard buffer to the user window. Save -- saves CSR's window content to a file on CSR station. Print -- Prints the client window content. Clear -- clears the user window content. Rotate -- enables the user to rotate an image in the user window by 90 degrees clockwise. Send To Customer -- this function transfers the content of the CSR window to the user's PC for display in the user station window.

20 The user command buttons include the following. Snap Shot -- takes a video snapshot of the user and this image is displayed at both the user and CSR sites. Print -- prints the content of the user's window at the user site. Capture Screen -- a snapshot of the user's window is displayed at both the CSR and user sites (note that in an embodiment of the present invention, the CSR video screen,
25 which is located on the top right corner of the user's window, is displayed as an empty pink rectangle box without the CSR's image; similarly, if the customer's PIP window is on the user's window, it is also shown as a pink box). Scan Document -- this button is only enabled if the user is configured with a scanner; it enables the CSR to scan a user document and transfer it to the CSR site for display
30 at both sites.

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When finished, the user clicks on the Exit button to terminate the clipboard application. After the Local Scan is launched, the clipboard application is running on both the user station and the CSR station. After the Remote Scan is launched, the clipboard application is running on both the user station and the CSR station,
5 and then the remote scanner is activated for scanning on the user station.

The Management Information System (MIS) data is designed to assist the business in analyzing and evaluating how effective the VBS system is in promoting sales. In order to provide such information, MIS data capturing is incorporated into Video Banking infrastructure software and its associated
10 applications. A Visual Basic class module facilitates MIS data capture by the applications. All the VBS MIS data captured are logged in a database file. An MIS Report generator program generates various types of MIS reports based on data captured by the VBS applications and infrastructure.

The CSR double clicks the icon of the MIS Report generator to start the
15 MIS report generator program. The window displayed in FIG. 24 then appears. The following functions are available within the window 250 shown in FIG. 24:

1) Select Report 241 -- the user can select different types of MIS reports; three pre-defined reports are provided; these include Session, CSR wise, and Product wise. Session provides information about video banking sessions, such as
20 CSR's name, session start time, and total session time (counting from the instance the "Ready" is clicked till the "Hangup" is clicked). CSR Wise is Grouped by CSR. Product Wise is Grouped by Products. A Custom option lets the user specify a non-default report file name, which includes, for example, any new MIS report developed using the MIS Report program.

25 2) Print Option 252 -- by default, the preview option is selected, and the report is shown on the screen. However, if required, the report is printed or saved as a text file.

3) Printer Setup 253 -- a standard printer setup dialog box appears in the report program.

30 4) Range selection 254 -- provides range selection.

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5) Print 255 -- the user clicks on the Print button to print the report according to the selection in the "Print Option".

6) Exit 256 -- the user clicks on the "Exit" button to exit the VBS Report Generator program.

5 FIG. 25 presents a sample VBS MIS report relating to a session printed using the MIS report program shown in FIG. 24. FIG. 26 presents a sample VBS MIS report regarding "to CSR." FIG. 27 presents a sample VBS MIS report regarding "to product."

The demo applications folder 106d, as shown in FIG. 21, includes options
10 for movies of the Australia rotating logo, bank in the sky, bank mortgage form preparation, and global asset management.

The home loan demo application is shown in FIG. 28. The form is presented in a window 260. The user provides, within boxes, personal information 261, including name, address, phone, social security, and indication of whether the
15 user is a bank customer; employment information 262, including employer, title, monthly salary, phone, number of years, and other income; payment information 263, including house payment, automobile payments, credit card payments, and other payments. A box 264 provides home loan information that includes purchase price and down payment. The user selects the calculations button 265 to
20 produce the home loan information 264.

FIG. 29 presents an example presentation of investment products division information.

FIG. 30 presents a window 270 containing the form for filling out a money market account application. The form is launched by the CSR by selecting it from
25 the application panel. In an embodiment of the present invention, as shown in FIG. 30, the form is completed by the CSR as the user is interviewed during a session. The window 270 includes buttons at the top for save form 271, customer number 272, with a pulldown list of customer numbers, CSR print 273, and
customer print 274. Boxes are included for customer personal information 275,
30 including name, address, home phone, business phone and extension, birthdate, social security number, and CIN; customer business information 276, including

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current employer, identification/references, employment, position, type of business, supervisor, and time at business/full time indication; and account information, including a pulldown menu 278 of data. The form filling application has the capability to display any business form previously scanned using the from design application. Using the buttons, the form can be printed at the CSR station
5 or the user station and saved for later viewing.

FIG. 31 presents an example slide of product promotional information for a banking institution.

FIG. 32 presents an example screen of the Brazil application
10 demonstration, which adopts the Global Remote Access Interface Layer (GRAIL) look and feel, as described in pending Design Patent Application No. 29/074,594, filed August 6, 1997.

EBS Embodiment

15 References will now be made in detail to sample GUI screens for the EBS embodiment of the present invention, an example of which is illustrated in the accompanying drawings.

The EBS is an alternative sales distribution channel linkable as a satellite to a Full Service Branch or implemented as a standalone banking center. The EBS is
20 a modular, flexible, and in some embodiments, mobile unit.

An advantage of the EBS is that it is less costly than a brick and mortar branch and, consequently, requires less payback time. The EBS is equipable with state-of-the-art, Video Banking technology, but is also capable of functioning with traditional relationship managers, if the local telecommunication infrastructure
25 does not allow video conferencing with good quality. It also includes equipment and furnishings by off-the-shelf local equipment/merchandise.

EBS is geared toward one-stop shopping rather than to transactions. An advantage of EBS is that it allows staff to function as greeters to direct targeted customers to the delivery channel that satisfies their needs and minimizes cost to
30 the bank. EBS allows staffing with an external sales force team that scrutinizes the

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marketplace, locates target customers, opens accounts remotely, and serves Business and Professional (B&P) customers.

Other advantages of EBS include the following. EBS allows the branch to be more sales than transaction oriented. It creates a cost-effective distribution
5 solution. The system assists with locating where customers live, work, and shop, thereby increasing convenience and lowering price sensitivity. EBS makes the one-stop shopping concept a reality, due to its use of Video Banking expertise on demand. It improves account opening rates with external sales force leverage and creates media and public awareness of the bank as a high-tech bank.

10 In addition, EBS assists a bank with easily reconfiguring, consolidating, and moving branches in a cost-effective way. The system ensure that the customer's needs are met using technology that is least costly to the bank, always bearing in mind the customer's sales potential.

The elements of the EBS vary according to the local business needs and
15 preferences. In general, these basic components are as follows:

1) Welcome Station. The Welcome Station generally accommodates two standing banking institution officers, who profile prospects and customers, discerning their needs and potential for the bank; direct them to the appropriate delivery channel to satisfy their needs; and educate them in the use of self-
20 service/remote devices. Inside the station, there is a bank card embosser device, a terminal, a printer, a PIN pad, and a telephone.

2) Information Towers. These information browser and touchscreen devices let customers view and print types of information selected by each business, such as information about the EBS, products and services in the specific
25 marketplace, global services, and special local offers and discounts.

3) Home Banking Kiosks. Home Banking Kiosks, with a PC or PC platform for TV, run the bank's home banking program. They are used to promote home banking, educate customers on its use, and show them how to install the software.

30 4) Kids PC. Kids PCs attract and entertain the children of customers and prospects.

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5) Two or more Phone Towers. The Phone Towers connect customers to the local country Service Center and allow handling of service needs at a lower cost than resolution by the staff or Video Banker. The Phone Towers also provide self-service experience for the customer.

5 6) One or two Video Banking Booths. Each video booth accommodates two people and is equipped with a scanner and a printer. There is also a smaller size video booth that accommodates one person for use, for example, in a corporate office lobby. The EBS Officer welcomes the targeted customer to the booth and explains how to connect to the remote Video Banker. An embodiment
10 of the video booth includes bank card issuance capability with a card reader and digitized signature pad.

7) One External Sales Force Area. Located in a back room or a less expensive nearby location, this staging area is used by one or more external sales officers to outsource new households. The staging area is equipped with a large
15 table, one or two terminals, telephones, a storage room for sales material and forms, a bathroom, and a mini-kitchen desktop.

This area supports the external sales force locally, and also allows for future EBS expansion. The area is convertible when lifestage changes occur, as, for example, when the space is needed to expand the EBS sales area for an
20 enlarged customer base. The area also supports B&P relationship managers, who require a different approach, and product package-service.

8) Two Waiting Areas. One waiting area accommodates customers who are not screened by the greeter in terms of needs and potential; the other accommodates those who are screened and are waiting to use the Video Banking
25 Booth.

9) Two or more ATMs (CATs, Mini NCRs, SlimCATs or other vendors). The ATMs support all current functions present in the marketplace. For ATMs that do not accept deposits, an embodiment includes the addition of deposit drop-boxes in the transaction area. In an embodiment of the present invention, the
30 ATMs are standalone models, such as the SlimCAT prototype, which does not require a back room for servicing.

10) One Checkbook Dispensing Station configured with a bank/credit card reader. The Checkbook Dispensing Station prints a checkbook of 10 to 20 customized checks as part of the new account opening -- after the bank card has been inserted and the PIN entered; or as a courtesy for existing customers who run
5 out of checks.

11) One Travelers Checks/Foreign Exchange Station. The Travelers Checks/Foreign Exchange Station allows customers to buy foreign currencies in marketplaces where frequent money exchange is needed, like Europe, or in tourist locations.

10 12) One Cashier/Managerial Check Delivery Station.

13) One Projection Display Panel (PDP). The PDP is used for businesses to run content according to their needs. The PDP serves as an attractor in a highly visible area of the EBS.

The interaction of layout and typical user experience with the EBS are as
15 follows. From the moment the customer walks in the door until they leave, the control of customer flow is critical. In most instances, the greeters, who are trained bank officers, are responsible for directing customers to the most cost-efficient technology that will satisfy their needs. In some marketplaces, due to geographic expansion restrictions, the EBS is unstaffed, such as in India.

20 Embodiments of the EBS help meet the challenges of automated customer screening for such situations. Where possible, EBSs are staffed to ensure better results when combined with Video Banking.

To control customer flow in the EBS, the greeter interaction with a user is typically as follows. The greeter screens the individual for potential and directs
25 the user to the appropriate touchpoint according to his or her need. They kindly suggest that the user is better served elsewhere (if the individual is determined to be nontarget), thereby preventing a video session that is nonproductive for the bank. Otherwise, the greeter invites targeted customers to engage in a Video Banking session.

30 The greeter issues the customer a bank card and assists with entry of the PIN (after the account opening during the Video Banking session), and escorts the

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customer to the ATM, assists in processing the account opening deposit, and explains features of the ATM. They take the user to the Checkbook Dispensing Station and assist in printing the first personalized checkbook. The greeter also provides the user with a Home Banking demo and a software package to install at
5 home.

The greeter also shows the customer how phone banking works, and encourage further interaction at the EBS for any future sales needs.

Although visits to the EBS also satisfy transaction needs, the goal is to emphasize sales. The customer can almost always satisfy transaction needs at
10 other remote locations -- at home or closer to home.

References will now be made in detail to an EBS embodiment of the present invention, an example of which is illustrated in the accompanying drawings.

FIG. 33 is a flow diagram for the method of an embodiment of the present
15 invention for the VBS for a prospective customer. In step S1, a prospective customer queries for assistance with their needs. In step S2, the prospective customer is screened for potential and needs and a determination is made as to whether the prospective customer is a target for a full relationship, is a nontarget, or is a target for single product acquisition.

20 In step S3, the prospective customer is determined to be a target for a full relationship. In step S4, the prospective customer accesses the video banking booth for account opening and a full understanding of the bank. In step S5, a bank card/credit card is issued. In step S6, the prospective customer makes a first deposit and/or obtains a first checkbook. In step S7, other services, such as home
25 banking are demonstrated and activated for the prospective customer, as a new customer.

In step S8, the prospective customer is determined to be a nontarget. In step S9, the prospective customer is directed to another bank or other institution.

In step S10, the prospective customer is determined to be a target for a
30 single product acquisition, and a determination is made as to whether the potential customer is a target for low margin products or high margin products. In step S11,

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the potential customer is determined to be a target for low margin products. In step S12, the potential customer accesses information towers, phone banking devices, or mail banking products. In step S13, the potential customer is determined to be a target for high margin products. In step S14, the potential customer accesses the video banking booth.

FIG. 34 presents the flow diagram for an existing customer. In step S20, the customer queries regarding services, and a determination is made as to whether to access self-service or assisted services. In step S21, the customer accesses self-service devices and products. In step S22, the customer selects from the following: 1) using an ATM/CAT (deposits, get cash, transfers, inquiries, etc.); 2) printing a checkbook; 3) buying travelers checks/obtaining foreign currency; 4) accessing a phone banking device; 5) using a home banking demo kiosk; and 6) browsing at an information tower.

In step S23, the customer accesses assisted services, and a determination is made as to whether there is a problem or the customer needs a product or advice. In step S24, the customer is determined to have a problem, and the problem is determined to be either minor or major. In step S25, the problem is determined to be minor. In step S26, the customer accesses a phone banking device hotline or speaks with a service representative. In step S27, the problem is determined to be major. In step S28, the customer accesses the video banking booth. In step S29, the customer is determined to need a product or advice, and the product or advice is determined to be high margin or low margin. In step S30, the product or advice needed is determined to be high margin, and the customer proceeds to step S28, in which the customer accesses the video banking booth. In step S31, the product or advice needed is determined to be low margin. In step S32, the customer accesses information towers, a phone banking device or mail banking.

FIG. 35 presents a banking facility layout, including zones and areas, for a VBS embodiment of the present invention. These zones and areas include a back office area 200, an external sales force and business and professional (B&P) area 201, a sales zone 202, a screening, information, and traffic direction zone 203, an initiation, education, and transaction zone 204, and a welcome station 205.

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The external sales force and B&P area 201 handles the local marketplace. finds microniches, and outsources new customers. The sales zone 202 handles opening of walk-in new accounts, cross-selling of new products, and providing of advice. The screening, information, and traffic direction zone 203 includes
5 greeting screens and information and direction for customers and prospects. In the initiation, education, and transaction zone, new customers learn to use self-service channels and initiate their relationship (e.g., make their first deposit, pick up their first checkbook, demo home banking, receive the home banking package, after opening the relationship through the remote video banker).

10 FIG. 36 presents staging area layout for a VBS embodiment of the present invention. The layout includes a welcome area 210 that includes a welcome station, information tower, PC home banking demo, and video banking booth. The layout also includes two backrooms 211 and 212; an initiation, education, and transaction area 213 that contains a slim CAT station, a checkbook dispensing
15 station, information towers, PC home banking demo, a foreign exchange station, phone banking devices, a CAT/ATM, and a check stand; a sales zone 214, with video banking booths, coffee area, and seating area; and a screening, information, and traffic direction zone 215, which contains a welcome station, children's PC, seating area, information tower, and projection display panel.

20 FIG. 37 presents staging area layout for another VBS embodiment of the present invention. The layout includes an external sales force staging area 220 with restroom mini kitchen, PC area, and one way mirror door; a sales zone 221, with video banking booths and home banking area; a secured room 222; an initiation, education, and transaction area 223 that contains a checkbook
25 dispensing station, an information tower, phone banking devices, CATs/ADA CATs/ATMs, and a check stand; and a screening, information, and traffic direction zone 224, which contains a welcome station, children's PC, home banking demo, seating area, information tower, and projection display panel.

FIG. 38 presents staging area layout for another VBS embodiment of the
30 present invention. The layout includes a back room 230 with embosser and printer; a secured room 231 housing CATs/ADA CATs/ATMs; and a combined

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area 232 containing a video banking booth, a checkbook dispensing station, an information tower, a phone banking device, a welcome station, children's PC, home banking demo, seating area, and a small projection display panel.

FIG. 39 presents staging area layout for another VBS embodiment of the present invention. The layout includes a back room 235 with embosser and printer; a secured room 236 housing a CAT/ATM, and a checkbook dispensing station; and a combined area 237 containing a video banking booth, PC home banking demo, an information tower, and a welcome station.

FIGS. 40A and 40B present two views of a mobile free-standing layout for another VBS embodiment of the present invention. FIG. 40A shows a side perspective of the embodiment. FIG. 40B shows the staging area layout for the embodiment. The layout includes a mobile welcome station 240, also shown in closeup in FIG. 40C; a video banking booth 241; storage area 242; marketing or phone banking device 243; CAT/ATM 244, phone banking device 245, small information display 246; checkbook dispensing machine 247 and marketing materials, brochures, etc., areas 248 and 249.

FIGS. 41A and 41B present two views of a mobile free-standing layout for another VBS embodiment of the present invention. FIG. 41A shows an overhead perspective of the embodiment. FIG. 41B shows a side perspective of the embodiment. As shown in FIG. 41A, the layout includes a welcome station 250; a video banking booth 251; storage area 252; phone banking device 253; CAT/ATM 254; projection display panel 255; home banking demo unit 256; and secured back office area 257.

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WHAT IS CLAIMED IS:

- 1 1. A method for a user to obtain remotely provided banking services.
2 comprising the steps of:
3 the user accessing a first terminal having a screen;
4 the user initiating communication with a first service representative at a
5 second terminal;
6 the first terminal automatically prompting the user to select one from a
7 group of performable banking functions;
8 the user selecting a banking function from the group of performable
9 banking functions;
10 the first terminal automatically prompting the user for additional
11 information relating to the selected banking function;
12 the first terminal transmitting information relating to the selected banking
13 function to the second terminal;
14 processing the selected banking function; and
15 the first service representative assuring completion of the processed
16 banking function.
- 1 2. The method of claim 1 further comprising the step of the first
2 banking representative transferring the user to second banking representative.
- 1 3. The method of claim 1 further comprising the step of the first
2 banking representative conferencing the user and a second banking representative.
- 1 4. The method of claim 1 further including the step of the service
2 representative prompting the user for additional information relating to the
3 selected banking function.
- 1 5. The method of claim 1 further including the step of the user
2 providing verbal information to the service representative.

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- 1 6. The method of claim 1 further including the step of the banking
2 representative viewing at the second terminal the screen of the first terminal.
- 1 7. The method of claim 6 wherein said step of viewing includes the
2 step of viewing at the second terminal the screen of the first terminal picture in
3 picture.
- 1 8. The method of claim 1 further including the step of said
2 representative inputting additional information to the second terminal.
- 1 9. The method of claim 1 wherein the user is a customer.
- 1 10. The method of claim 1 wherein the inputting step includes providing
2 data using a keypad.
- 1 11. The method of claim 10 wherein the keypad is a keyboard.
- 1 12. The method of claim 1 wherein the inputting step includes the step
2 of providing data using a touch screen.
- 1 13. The method of claim 1 wherein the inputting step includes the step
2 of providing a signature into an electronic signature capture device.
- 1 14. The method of claim 1 wherein the inputting step includes the step
2 of providing document information into a document camera.
- 1 15. The method of claim 1 further comprising the step of the user
2 providing a deposit.
- 1 16. The method of claim 1 wherein the step of selecting one from the
2 group of performable banking functions includes the step of opening a new
3 account.

1 17. The method of claim 1 further comprising the step of issuing a bank
2 card.

1 18. The method of claim 1 further comprising the step of issuing a
2 credit card.

1 19. The method of claim 1 further comprising the step of printing
2 checks for the user.

1 20. The method of claim 1 further comprising the step of obtaining an
2 image of the user.

1 21. The method of claim 20 wherein said step of obtaining an image of
2 the user further includes the step of videotaping the user.

1 22. The method of claim 20 wherein said step of obtaining an image of
2 the user further includes the step of obtaining a digital image of the user.

1 23. The method of claim 1 wherein the step of selecting one from the
2 group of performable banking functions includes the step of providing information
3 on products.

1 24. The method of claim 23 wherein the step of providing information
2 includes the step of selecting a video for viewing.

1 25. The method of claim 1 wherein the step of selecting one from the
2 group of performable banking functions includes the steps of:
3 displaying a form for the selected banking function; and
4 inputting to the form data for the selected banking function.

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1 26. The method of claim 25 wherein the step of completing the form
2 includes the step of the first terminal replicating the form display and input
3 information as it is displayed on the second terminal.

1 27. The method of claim 26 wherein the step of completing the form
2 includes the step of the second terminal controlling the form display and input
3 information as it is displayed on both the first terminal and the second terminal.

1 28. The method of claim 25 further including the steps of:
2 the second terminal accessing information from a third terminal; and
3 the second terminal projecting the accessed information on both the first
4 terminal and the second terminal.

1 29. The method of claim 25 further comprising the step of providing
2 simulate results for inputted data.

1 30. The method of claim 1 wherein the first terminal comprises a
2 personal computer.

1 31. The method of claim 1 wherein the first terminal comprises a touch
2 screen.

1 32. The method of claim 1 wherein said step of initiating a video
2 communication further includes the step of using a two-way video
3 teleconferencing unit.

1 33. The method of claim 32 wherein the two-way video
2 teleconferencing unit comprises a personal computer.

1 34. The method of claim 33 wherein the personal computer comprises
2 an audio/video compression/decompression card.

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1 35. The method of claim 1 wherein the step of initiating communication
2 includes the step of using an audio communication device.

1 36. The method of claim 35 wherein the step of using the audio
2 communication device further includes the step of using a two-way video
3 teleconferencing unit.

1 37. The method of claim 1 wherein the step of transmitting includes the
2 step of accessing a network.

1 38. The method of claim 37 wherein the network comprises an
2 integrated services digital network.

1 39. The method of claim 37 wherein the network comprises the Internet.

1 40. A method for providing a potential customer with banking services,
2 comprising the steps of:
3 screening the potential customer for potential and needs;
4 determining whether the customer is a target for a product;
5 accessing a video banking booth, wherein the potential customer performs
6 banking functions via communication with a remotely located service
7 representative.

1 41. The method of claim 40 further comprising the step of targeting the
2 customer for a full relationship with a banking institution.

1 42. The method of claim 40 further comprising the steps of:
2 the user providing a deposit; and
3 issuing a checkbook to the user.

1 43. The method of claim 40 further comprising the step of providing
2 information to the user.

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1 44. The method of claim 43 wherein the information includes home
2 banking information.

1 45. The method of claim 40 further comprising the step of activating
2 home banking for the user.

1 46. A banking service unit comprising:
2 a walled facility within a larger environment that is accessible by a user;
3 a welcome station located within the walled facility;
4 an automatic teller machine within the walled facility and remote from the
5 welcome station; and
6 a remote service area for obtaining banking service from an external service
7 area to the walled facility, wherein the remote service area is within the walled
8 facility and remote from the welcome station and the automatic teller machine; and
9 wherein the remote service area provides banking service 24 hours a day, seven
10 days a week, so long as the larger environment outside the walled facility
11 accessible by the user.

1 47. The banking service unit of claim 46 further comprising an
2 information presentation unit within the walled facility and remote from the
3 welcome station, the remote service area, and the automatic teller machine.

1 48. The banking service unit of claim 47 wherein the information
2 presentation unit includes a video display.

1 49. The banking service unit of claim 46 further comprising a back
2 office area that is inaccessible to customers.

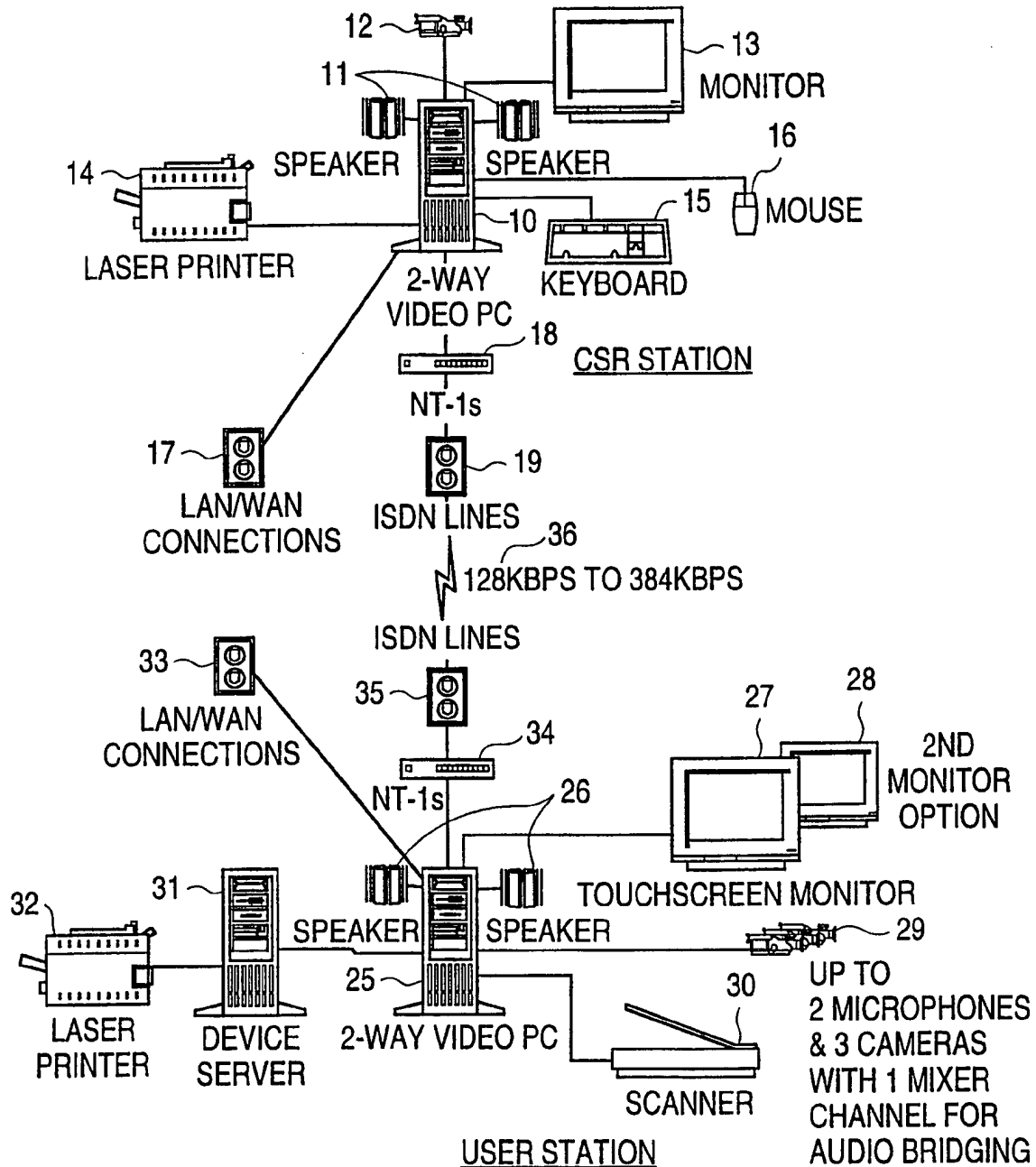
1 50. The banking service unit of claim 46 wherein the remote service
2 area comprises a terminal.

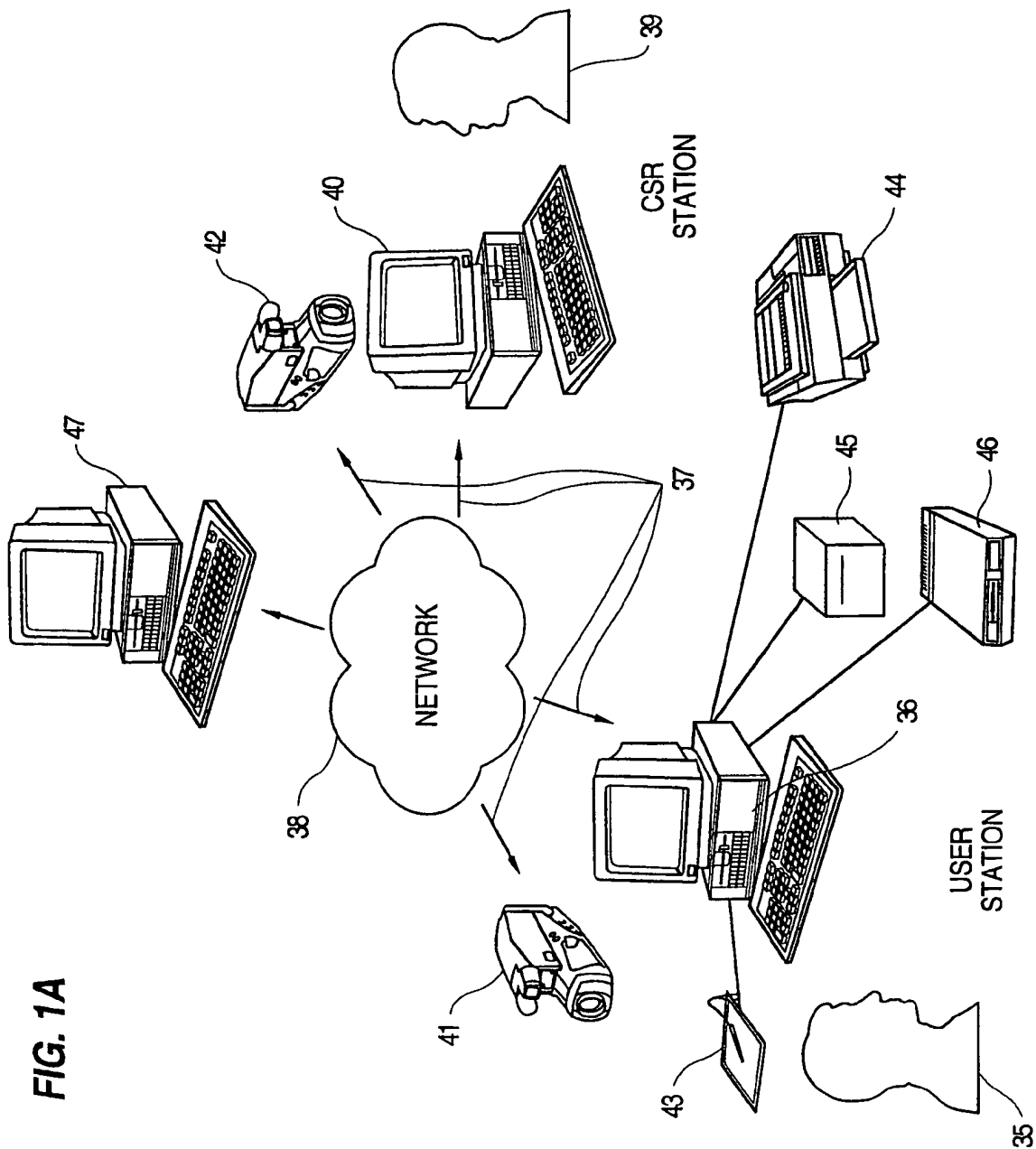
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1 51. The banking service unit of claim 50 wherein the terminal is
2 connected to a processing unit at the external service area.

1 52. The banking service unit of claim 46 wherein said automated
2 service area comprises a two-way video teleconferencing unit.

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FIG. 1**CAMERA & MICROPHONE WITH TELEPROMPTER OPTION**



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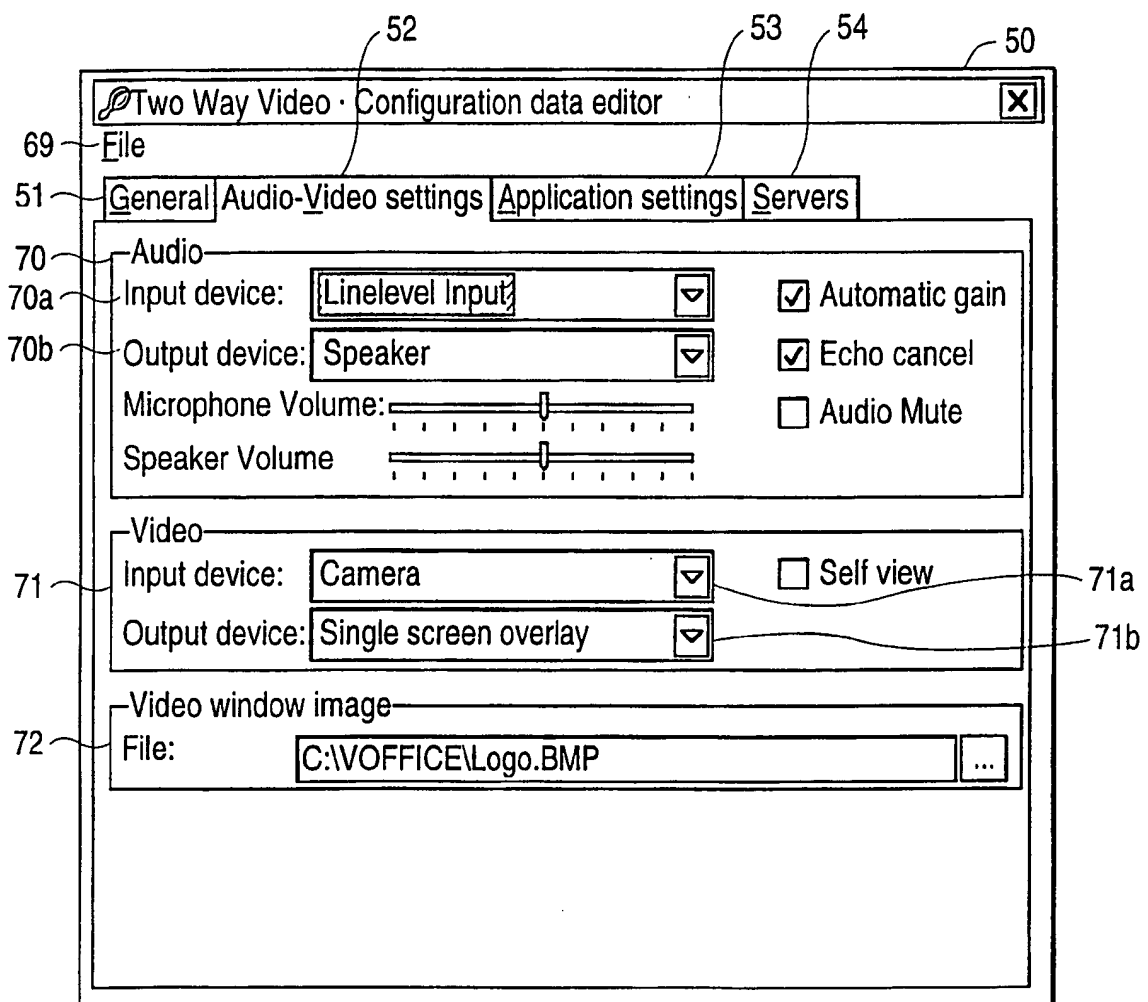
FIG. 2

The figure shows a software window titled "Two Way Video Configuration data editor". It features a menu bar with "File" and a tabbed interface with "General", "Audio-Video settings", "Application settings", and "Servers". The "General" tab is active, displaying several configuration sections:

- Workstation Identifier:** A text field containing "0002".
- Codec Type:** A text field containing "Z250".
- Call size:** A dropdown menu showing "384".
- Station Type:** Radio buttons for "Customer station" (selected) and "CSR station".
- Customer station phone numbers:** Two text fields labeled "First:" (containing "1308") and "Second:" (containing "1308").
- CSR station phone number:** Two text fields labeled "First:" (containing "1340") and "Second:" (containing "1340").
- Optional Devices:** Checkboxes for "Printer" and "Scanner", both checked. Each has a "Resolution:" dropdown menu (300 and 100 respectively).
- Screen settings:** Four text fields for "Top:" (-300), "Width:" (12015), "Left:" (0), and "Height:" (9700).
- Data cleanup interval:** A section with "Period in days:" (containing "5") and a "Never" button.

Reference numerals 50 through 69 are used to identify specific components of the interface, such as the window title bar, menu bar, tabs, and individual input fields.

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FIG. 3

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FIG. 4

Two Way Video Configuration data editor

File

General Audio-Video settings Application settings Servers

Main heading for application forms: Citibank Video Banking System

Default CSR name: CSR's Name

Images

Background: C:\VOFFICE\Media\Background.bmp ...

Greeter: C:\VOFFICE\Media\Background.bmp ...

Promotional movie to greeter

First movie: C:\VOFFICE\Media\GreeterMovie.avi ...

Second movie: C:\VOFFICE\Media\GreeterMovie2.avi ...

Directories

Forms: c:\VOffice\Forms

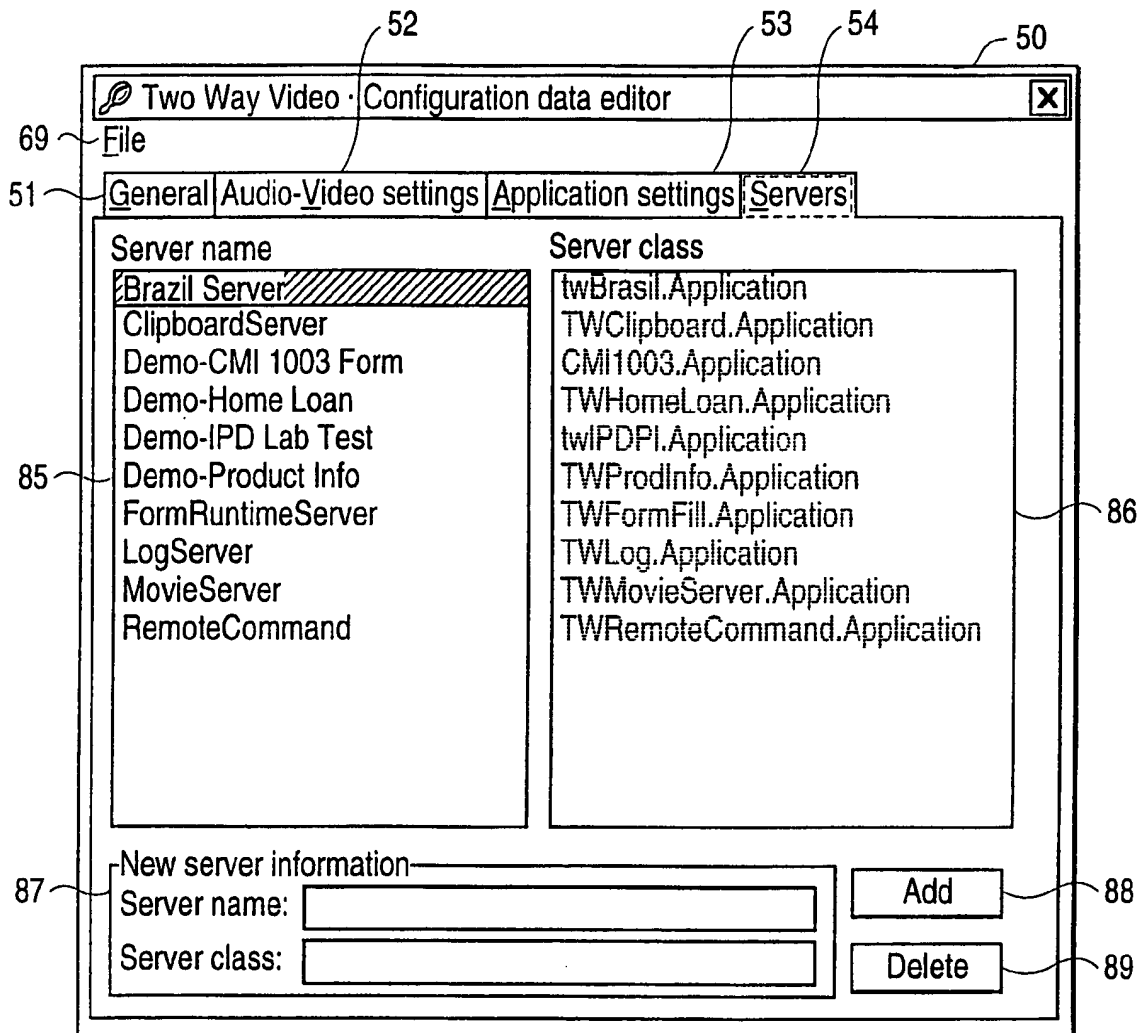
Media: c:\VOffice\Media

Work: c:\VOffice\TEMP

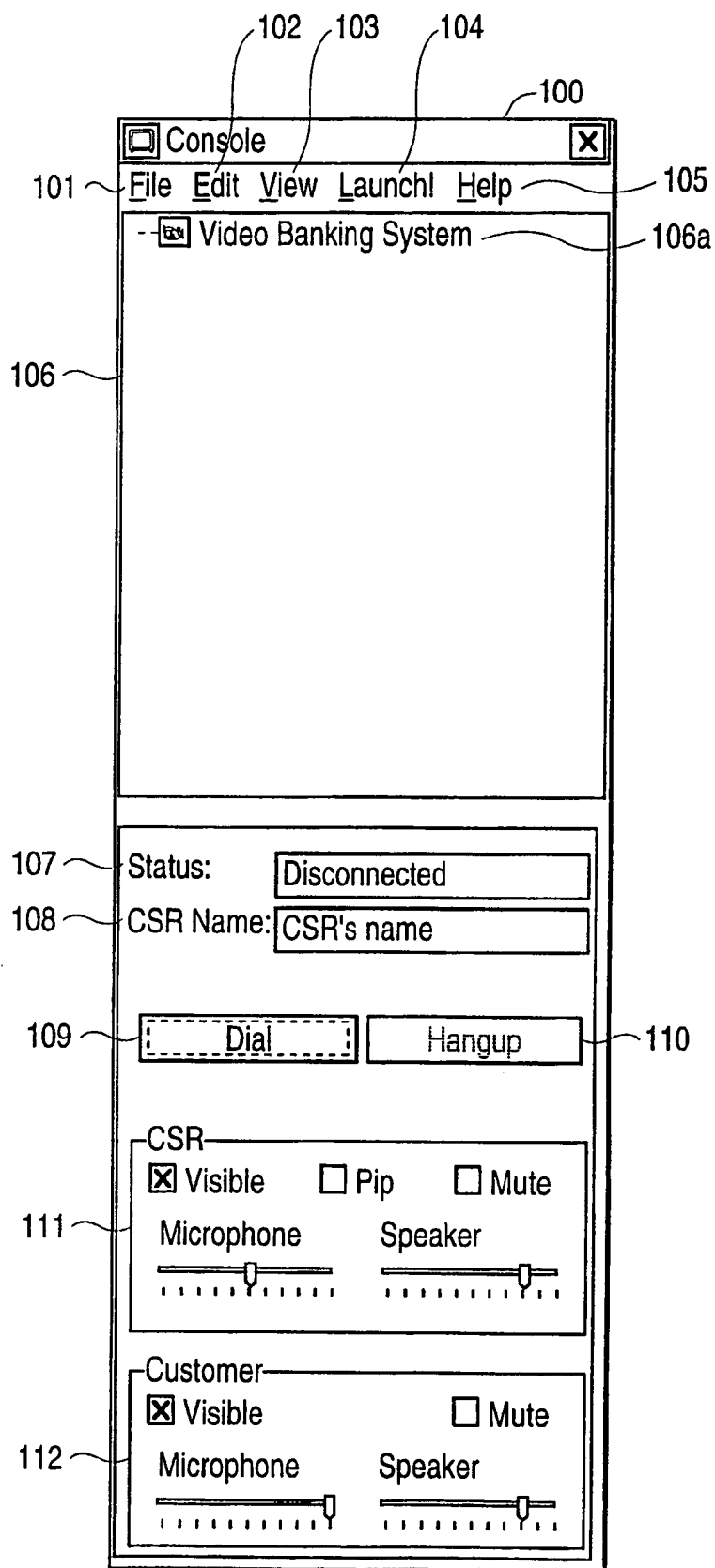
Snapshot program

Path: C:\VOFFICE\snap32.exe ...

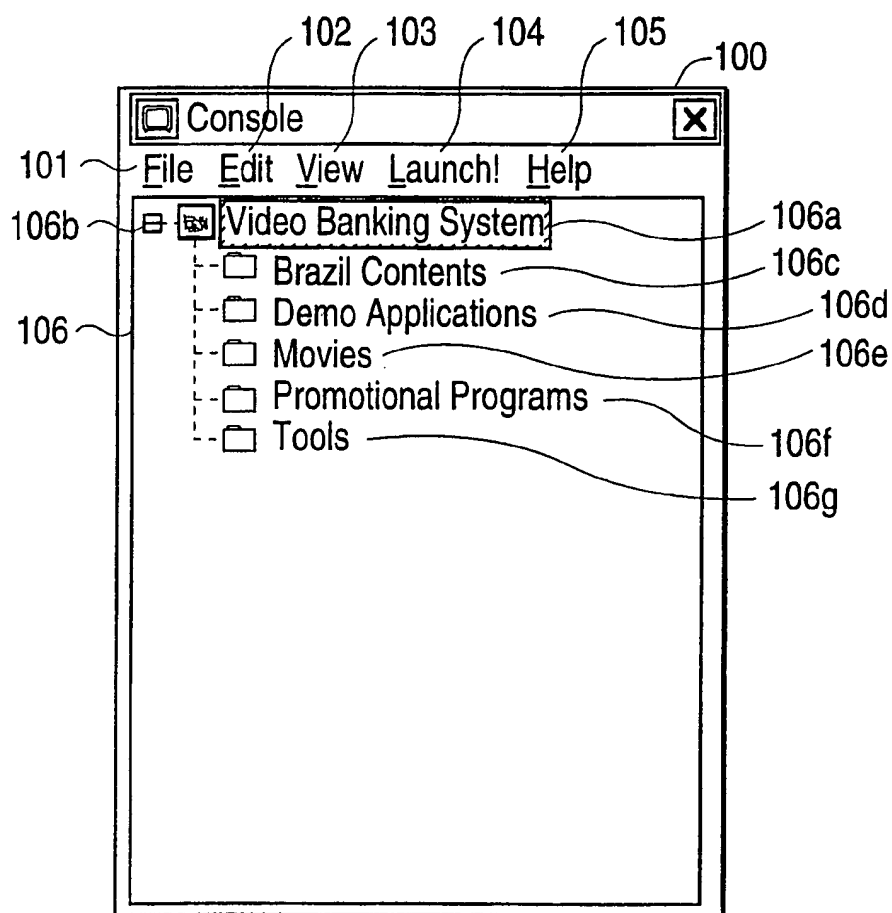
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FIG. 5

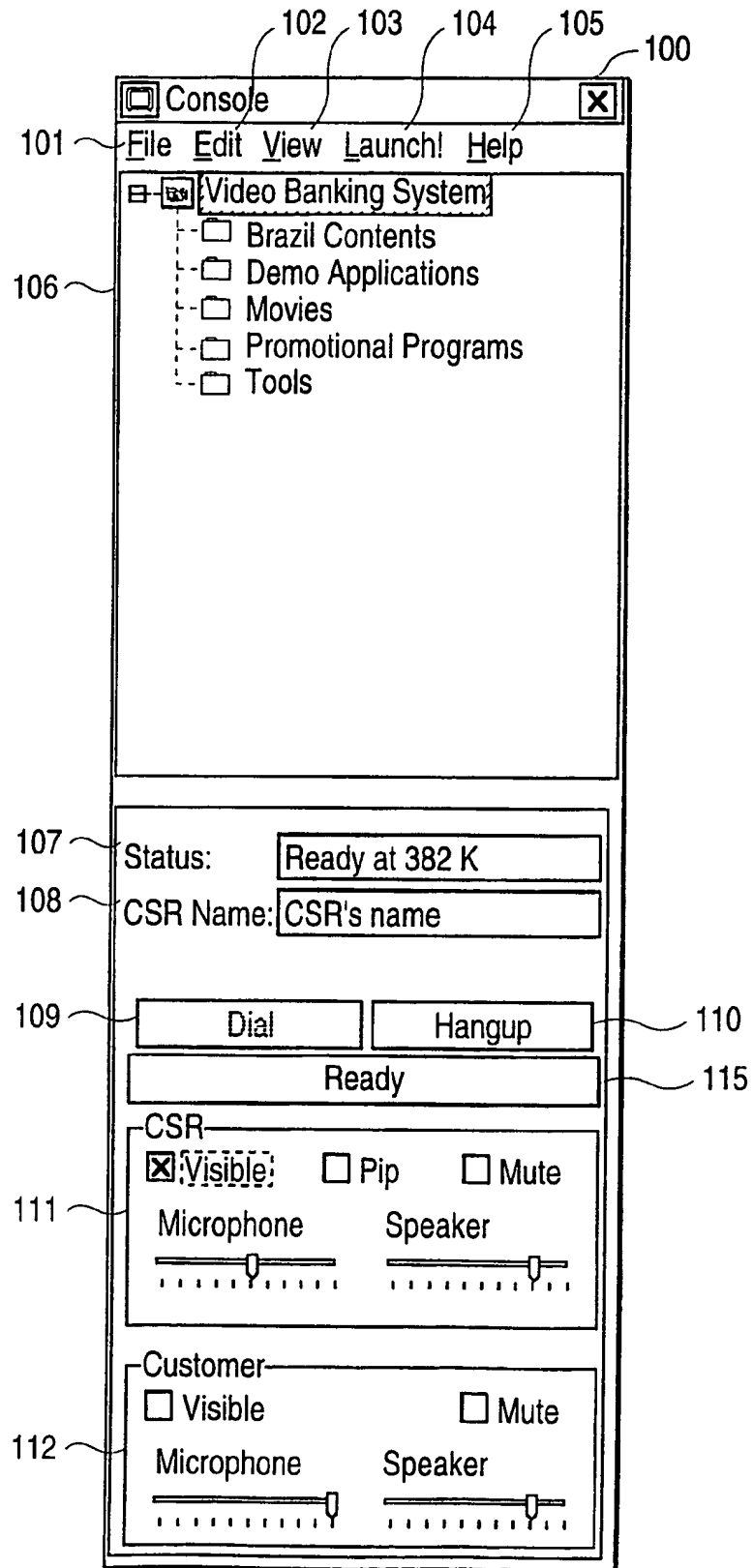
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FIG. 6

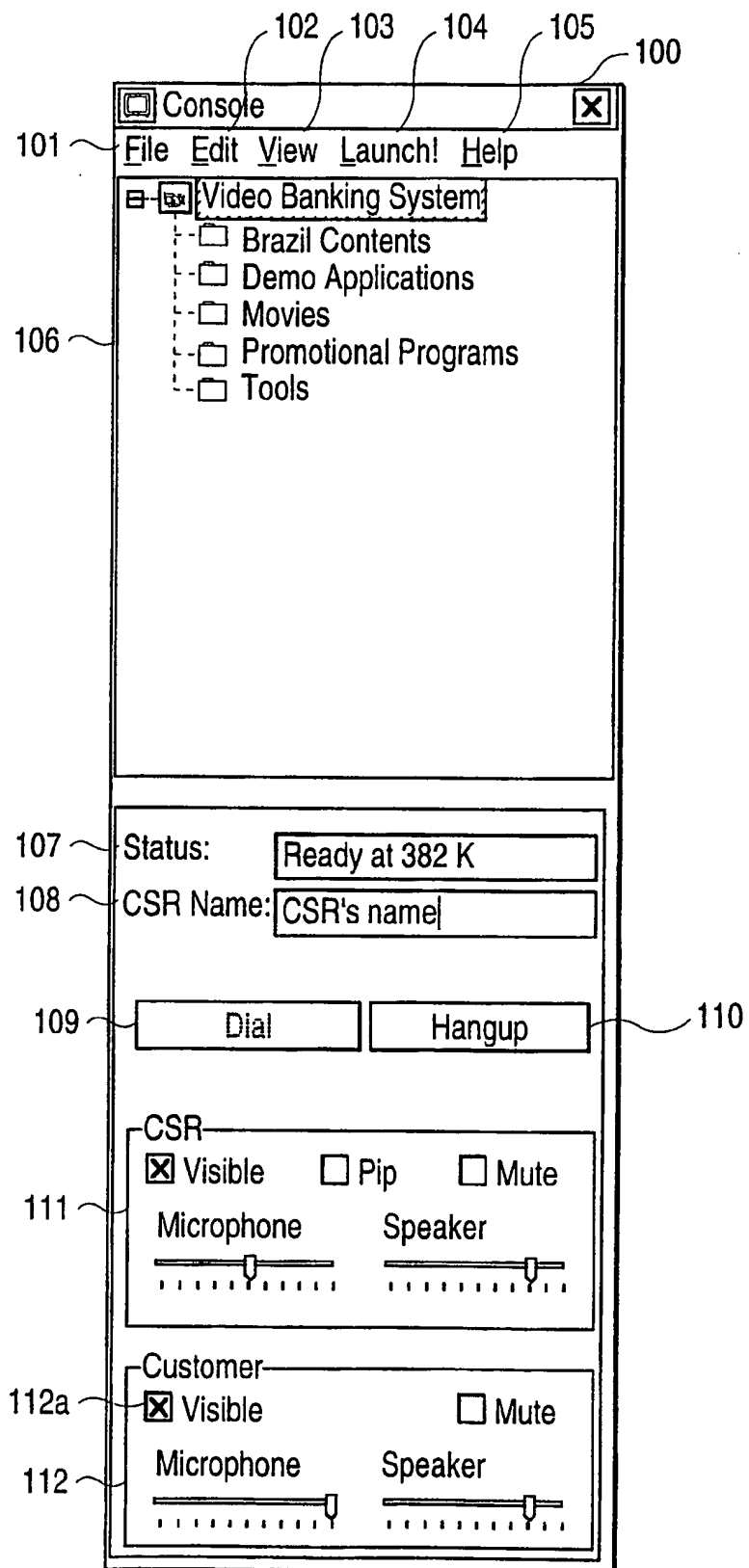
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FIG. 7

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FIG. 8

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FIG. 9

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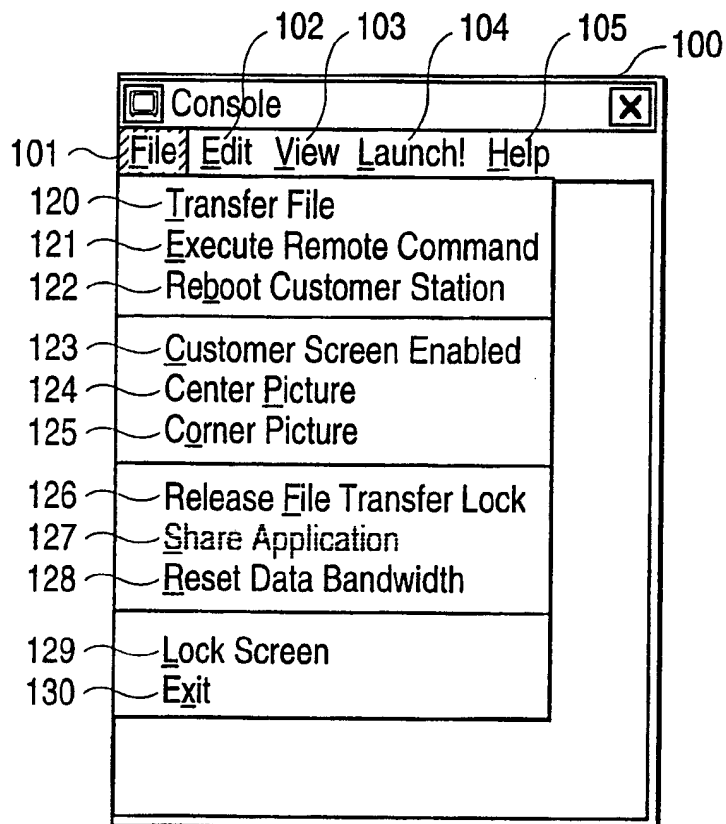
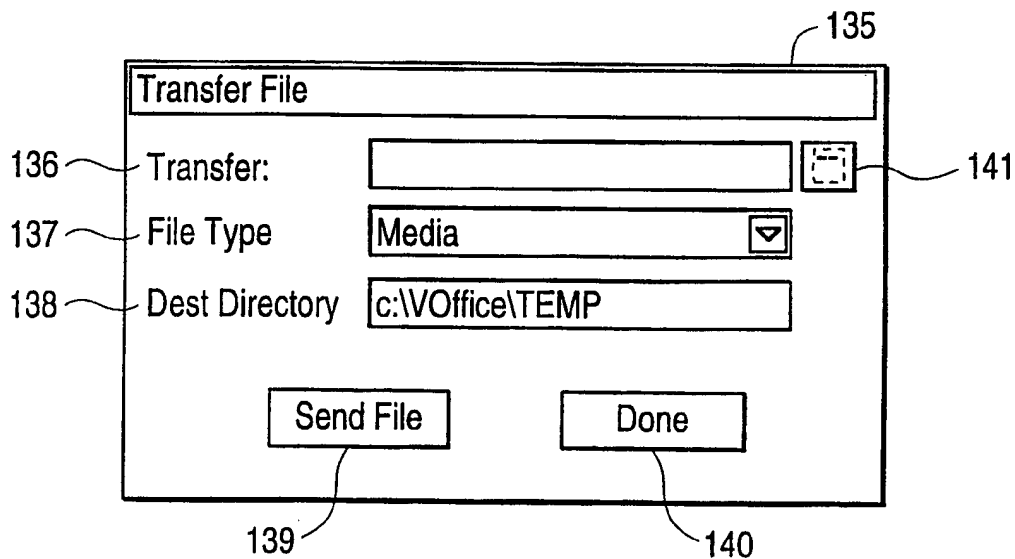
FIG. 10**FIG. 11**

FIG. 12

Remote Command Execution 145

Enter command for remote execution: 146

Command results: 147

Clear 148

Cancel 149

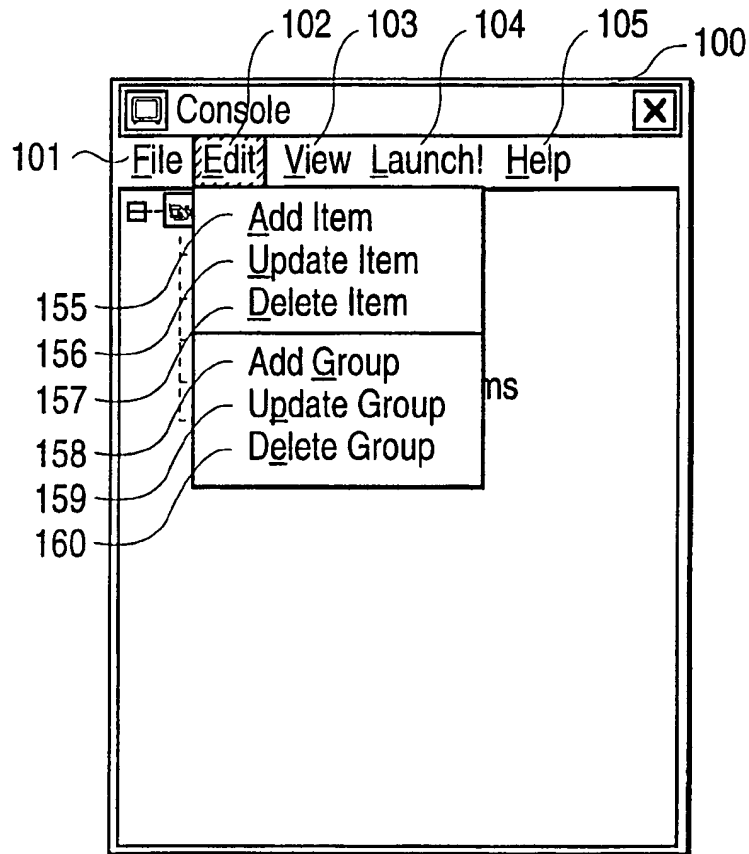
Execute 150

Save 151

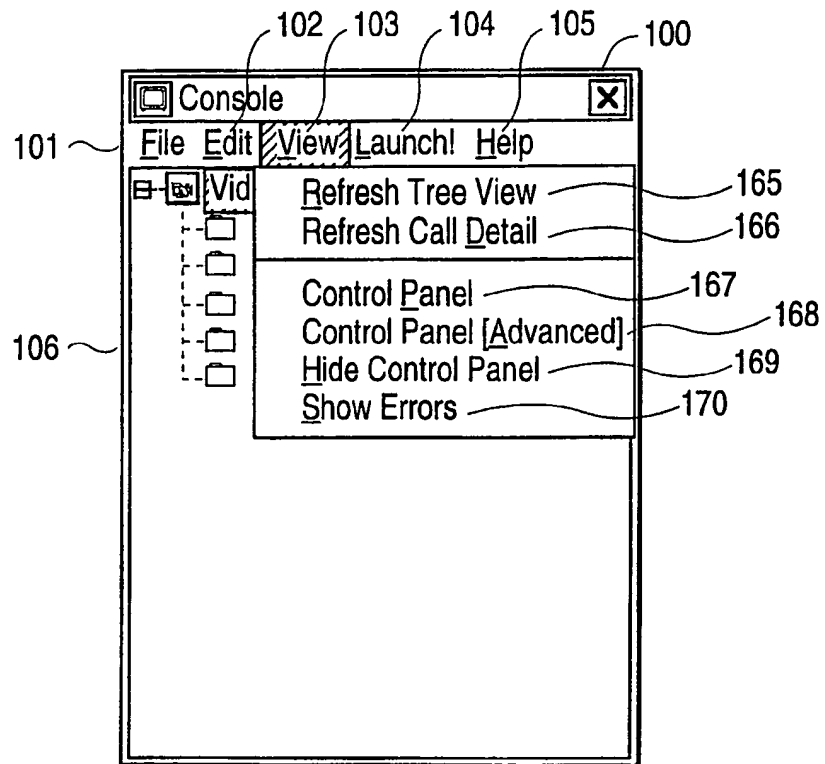
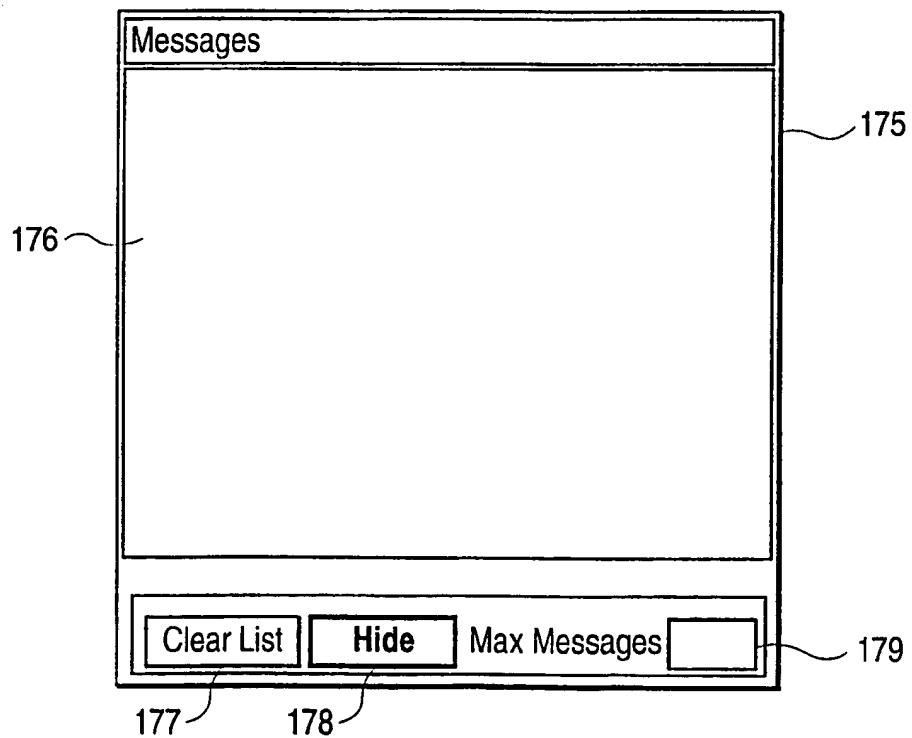
Done 152

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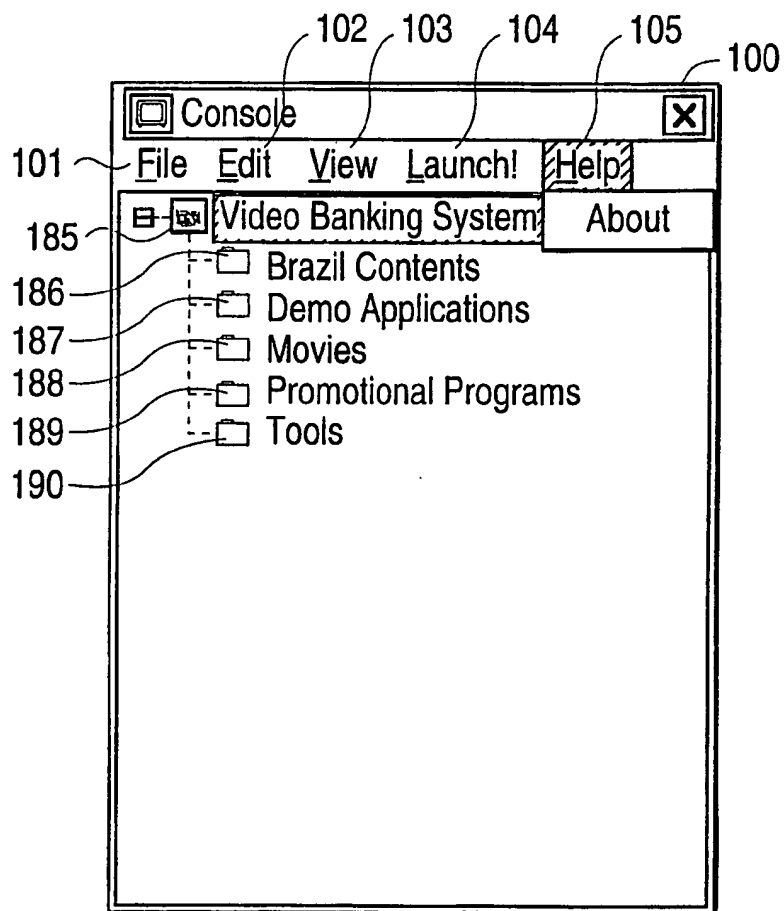
FIG. 13



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FIG. 14**FIG. 15**

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FIG. 16

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FIG. 17

200 201 202 203 204

CSR Cust Transfer Procs Property

205 Status: Ready at 382 K

206 Phone No: 1340

207 Video

Camera Visible

CIF 198K Pip

208 Audio

Linelevel Input Echo

G.722 M2 56K AutoGain

Mute

Microphone Speaker

209 Date

HSD 128K 128K

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FIG. 18

200 201 202 203 204

CSR Cust Transfer Procs Property

210 Status: 2250 at 382 K

211 Phone No: 1308

Video

212 Camera ☒ Visible

CIF ☒ 198K ☐ Pip

Audio

213 Linelevel Input ☒ Echo

G.722 M2 ☒ 56K ☐ AutoGain

Mute

Microphone Speaker

214 Date

HSD 128K ☒ 129K

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FIG. 18A

FIG. 18A is a graphical user interface (GUI) window 195. The window features a header bar at the top with five buttons: 200 (labeled 'CSR'), 201 (labeled 'Cust'), 202 (labeled 'Transfer'), 203 (labeled 'Procs'), and 204 (labeled 'Property'). The 'Transfer' button (202) is highlighted with a dashed border. Below the header bar, the window contains two data fields. The first field, labeled 215, is titled 'Status:' and contains the text 'NotReady'. The second field, labeled 216, is titled 'Last File:' and is currently empty. The entire window is enclosed in a rectangular border.

CSR	Cust	Transfer	Procs	Property
Status: NotReady				
Last File:				

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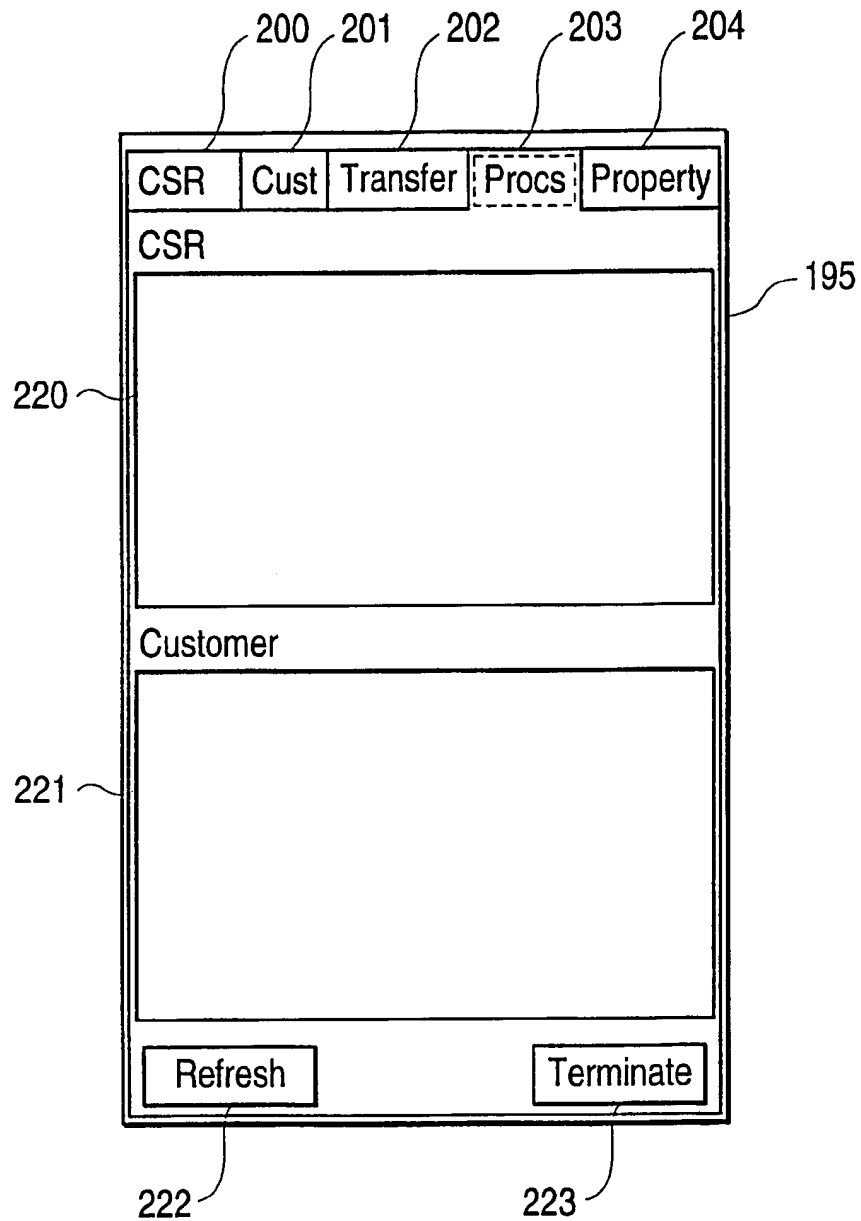
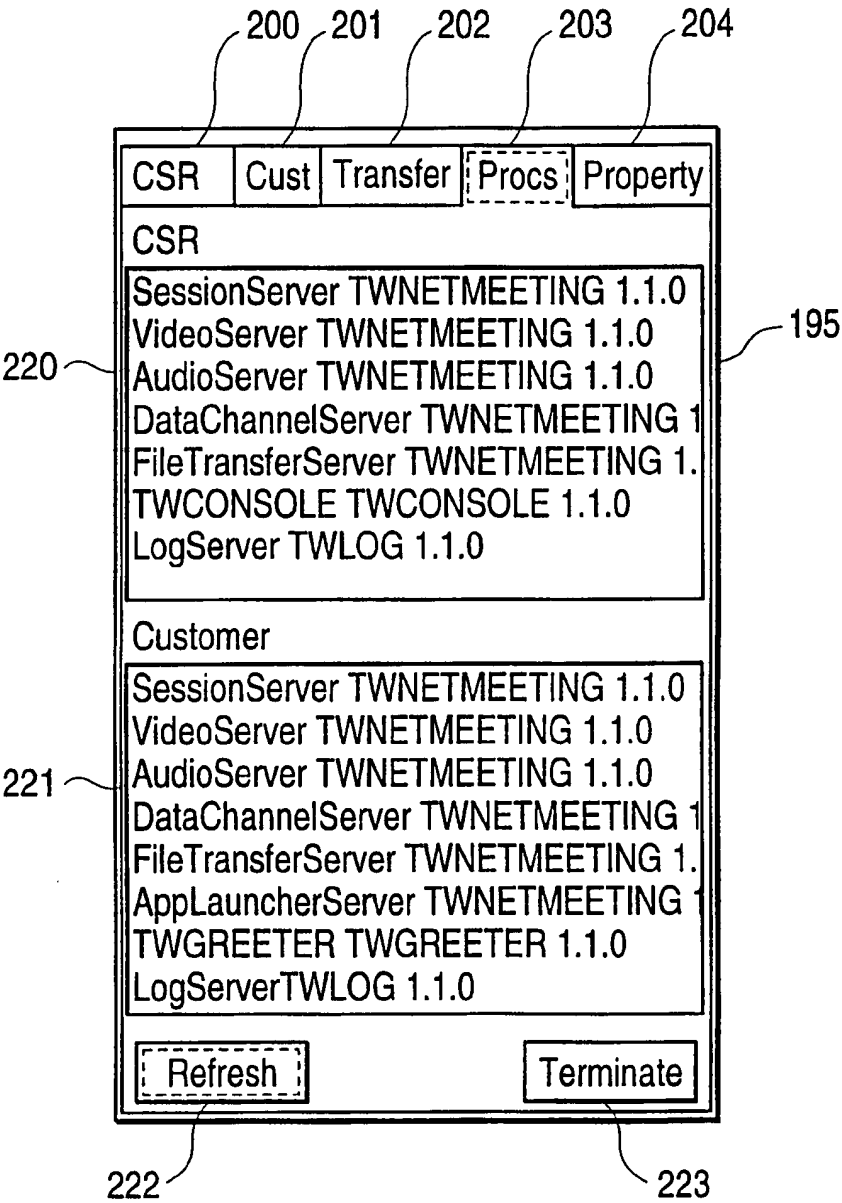
FIG. 19A

FIG. 19B



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FIG. 20

The diagram illustrates a software dialog box, labeled 195, with a tabbed interface. The tabs at the top are labeled 200 (CSR), 201 (Cust), 202 (Transfer), 203 (Procs), and 204 (Property). The 'Property' tab (204) is currently selected and highlighted with a dashed border. Below the tabs, the dialog box contains several input fields and labels:

- 225 Group: [Text input field]
- 226 Description: [Text input field]
- 227 Server: [Text input field with a dropdown arrow]
- 228 Arguments: [Text input field]

At the bottom of the dialog box, there are two buttons: 229 (OK) and 230 (Cancel).

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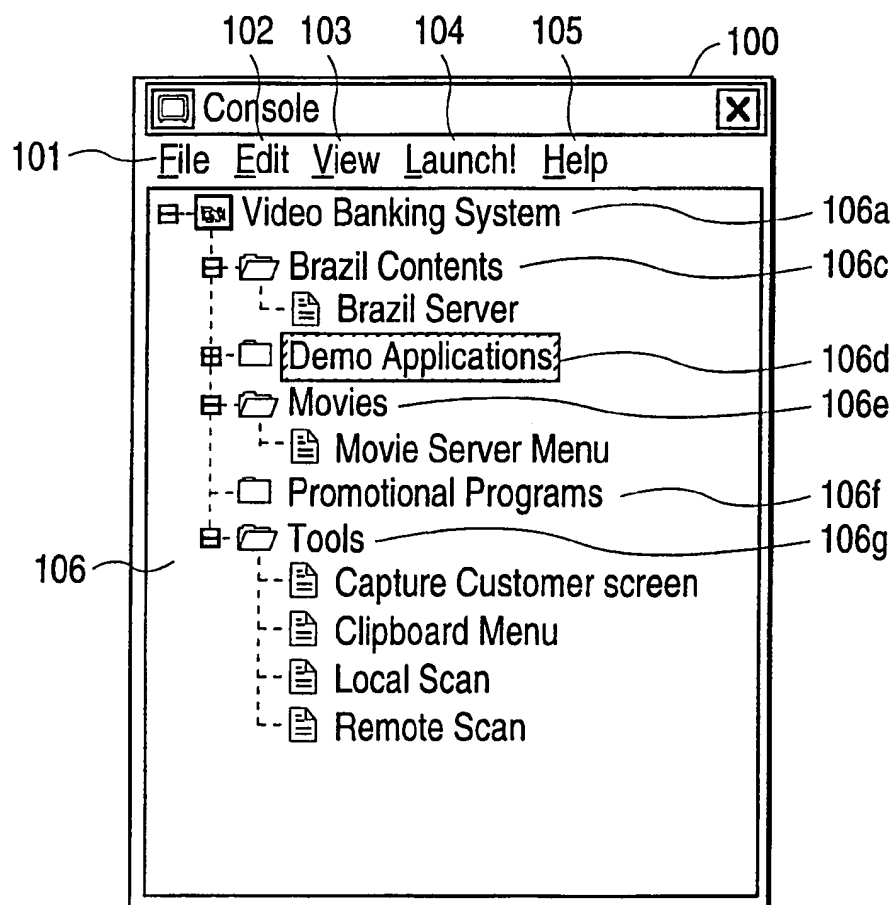
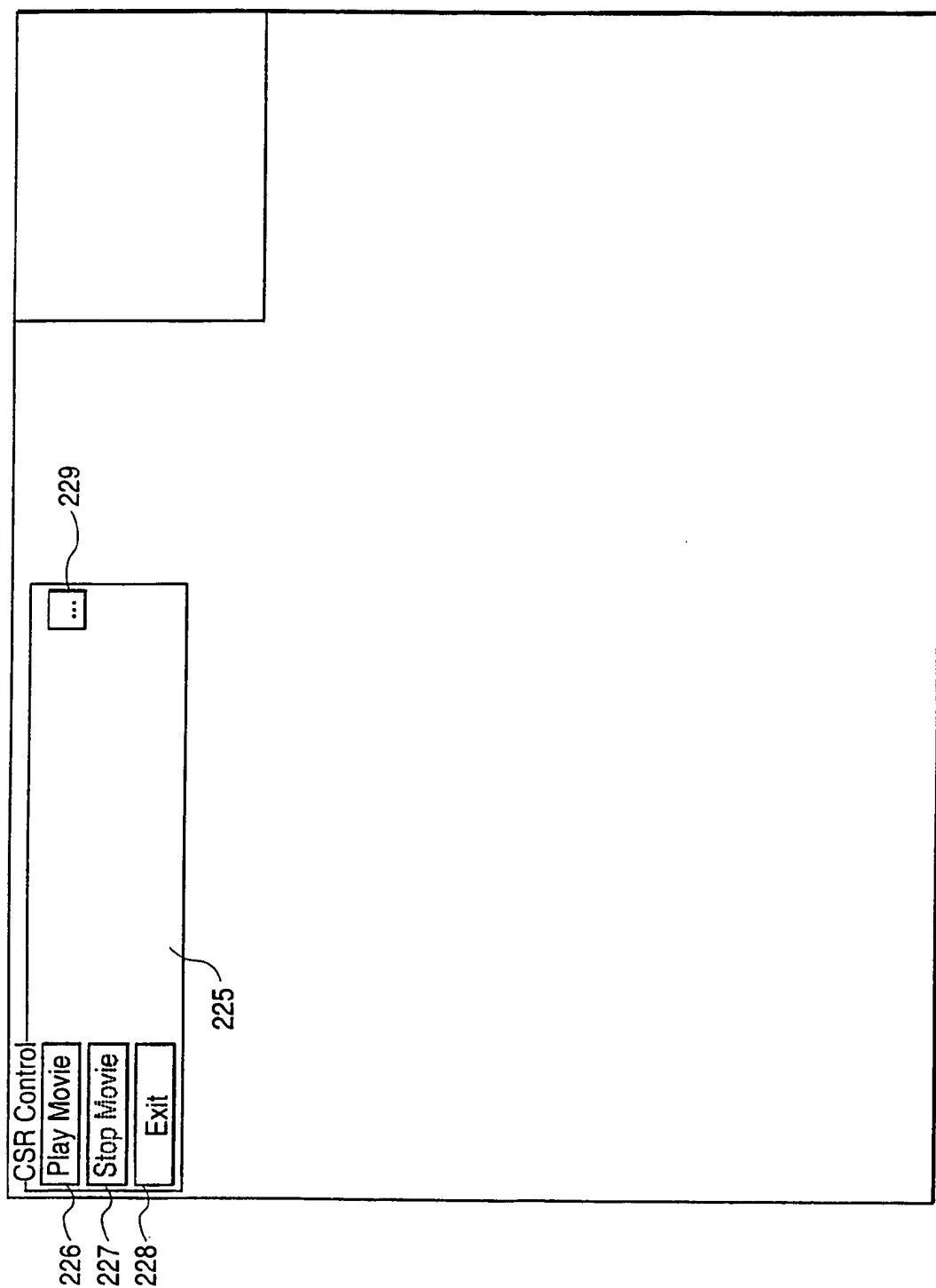
FIG. 21

FIG. 22



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FIG. 23

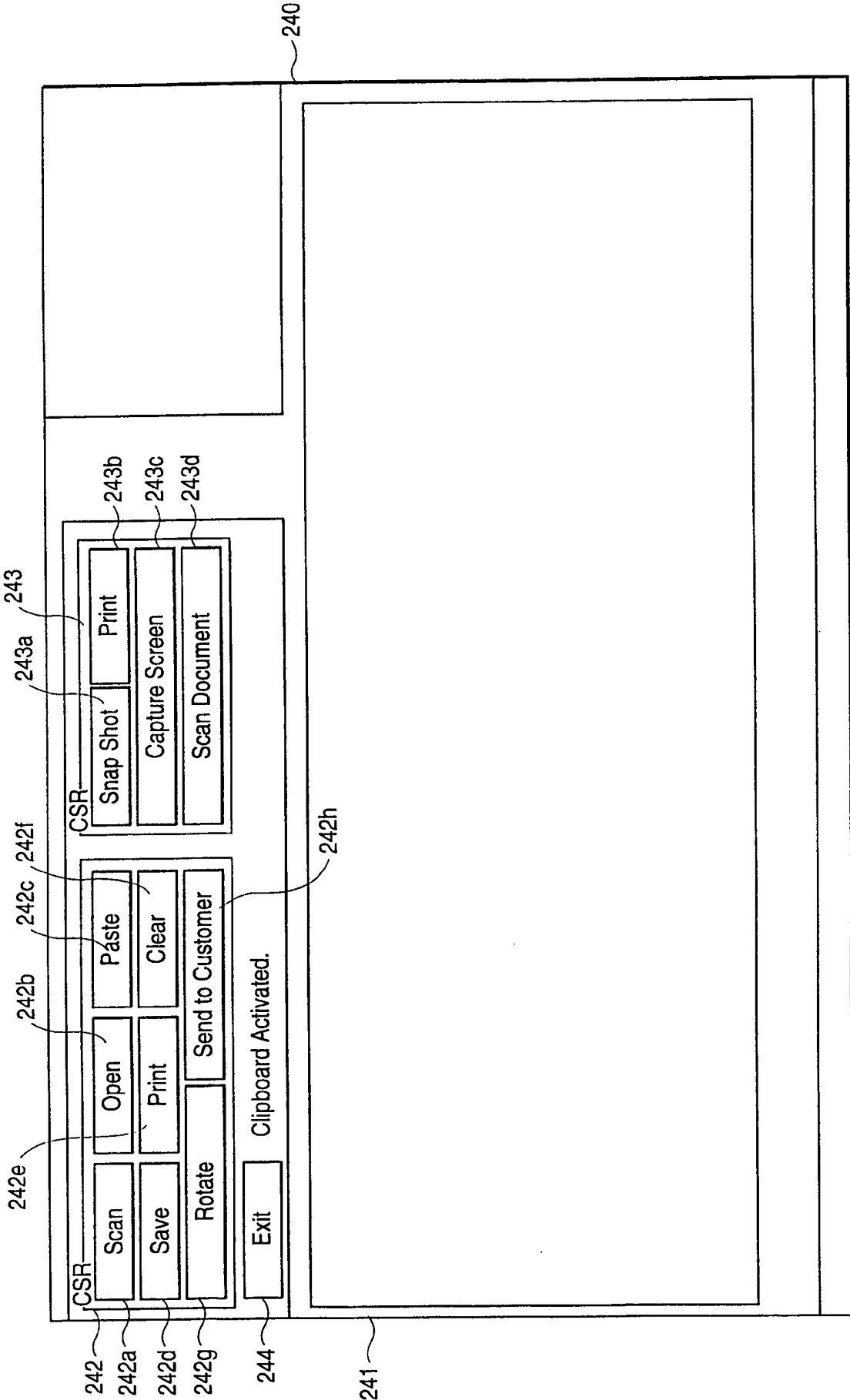


FIG. 24

250

Video Banking MIS Report Program

251

Select Report

☐ Session ☒ CSR Wise

☐ Product Wise ☐ Custom

C:\OFFICE\MIS\REPORTS\ICDR.rpt ...

253

Printer Setup

255

Print Report

256

Exit

252

Print Option

☒ Preview ☐ Print

☐ File

...

254

Date Range

☒ Today ☐ Range

From

To

...

Printing Complete

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FIG. 25

<u>VIDEO BANKING SESSION REPORT</u> <u>(INFRASTRUCTURE - SESSION)</u>				
CSR Name / Product Name	Start Time	Code	Duration	Customer Name
CSR's Name Twinfrastructure	1997/07/09 09:04:41.00	0	142	
	1997/07/09 09:22:47.00	0	75	
	1997/07/09 09:22:47.00	0	749	
	1997/07/09 09:38:00.00	0	50	
	1997/07/09 09:42:45.00	0	149	
	1997/07/09 17:21:29.00	0	253	
Count = 6				
Total = 6				
Simon Ma Twinfrastructure	1997/07/08 14:35:58.00	0	888	
	1997/07/08 14:52:25.00	0	105	
	1997/07/08 16:37:24.00	0	36	
	1997/07/08 20:48:27.00	0	220	
Count = 4				
Total = 4				

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FIG. 26

Wordstation ID: s1600105

VIDEO BANKING SESSION REPORT
(CSR - PRODUCT WISE)

CSR Name / Product Name	Start Time	Code	Duration	Customer Name
The Big Kahuna				
ACCOUNT				
Account Form	1998/03/03 10:47:28.00	0	6	
Other Forms	1998/03/03 10:48:30.00	0	1	
Account Form	1998/03/03 10:53:44.00	0	1,181	
Account Form	1998/03/12 11:17:40.00	0	19	
Account Form	1998/03/06 14:51:54.00	0	34	
Count = 5				
INSURANCE				
Life	1998/03/03 10:48:34.00	0	2	
Citicard	1998/03/12 11:17:10.00	0	3	
Citicard	1998/03/12 11:17:14.00	0	2	
Count = 3				
LACB				
Citiaccount	1998/03/02 18:00:01.00	0	4	
Citiaccount	1998/03/03 10:37:42.00	0	3	
Citiaccount	1998/03/03 10:40:17.00	0	3	

1 of 1 < > Cancel Close 25 of 104 Total:104 100%

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FIG. 27

VIDEO BANKING SESSION REPORT
(PRODUCT WISE)

CSR Name / Product Name	Start Time	Code	Duration	Customer Name
Product: ACCOUNT				
Manish Pandya	1998/03/03 10:47:28.00	0	55	SIMON RA
Manish Pandya	1998/03/03 10:48:30.00	0	25	
CSR's Name	1998/03/03 10:53:44.00	0	77	
Total Count = 3				
Product: INSURANCE				
Manish Pandya	1997/06/09 00:00:00.00	0	26	
Sameer Kamat	1997/06/09 00:00:00.00	0	22	
Manish Pandya	1997/06/09 00:00:00.00	0	18	
Manish Pandya	1997/06/09 00:00:00.00	0	8	
Manish Pandya	1997/06/09 00:00:00.00	0	85	
CSR's Name	1997/07/09 09:44:09.00	0	73	
CSR's Name	1997/07/09 09:44:10.00	0	74	
CSR's Name	1997/07/09 09:44:13.00	0	72	
CSR's Name	1997/07/09 17:22:40.00	0	188	
Total Count = 9				

1 of 1 18 of 120 Total:120 100%

Close

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FIG. 28

CITICORP ☒ **Echo Each Key**

CITIBANK HOME LOAN APPLICATION

Name:

Address:

Phone: Citicorp Customer:

Social Security:

Employer Name: Phone:

Title: Number of Years:


Monthly Salary: Other Income:

House Payment: Credit Card Payments:

Automobile Payments: Other Payments:

Purchase Price: 00

Down Payment: 00

Calculations 

260

261

262

263

264

265

CITICORP INVESTMENT SERVICES
A CITIBANK COMPANY

Citicorp Investment Services

Once we have an understanding of your goals, concerns, personal profile, and comfort level for risk, we can recommend an investment strategy and the products to implement that strategy. Asset allocation is the key to our investment approach. Let's take a look at some of our key products.

Based on what we've discussed about you, here's our preliminary recommendation:

Asset Allocation Strategies

**MODEL 3
Balanced**

Domestic Stocks
40%

International Stocks
20%

Domestic Bonds
30%

International Bonds
10%

Historical Performance of Model 3 Balanced

Your Personal Banker

Your Comfort Level for Risk

Your Goals

CITICORP INVESTMENT SERVICES

Your Personal Profile

Your Concerns

FIG. 29

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FIG. 30

271 Save Form Customer# 0 272 CSR Print Cust Print ☒ Echo Each Key 273 274 270

Citibank Money Management Account

275

Date Opened: 11/4/96

Name: Customer

Mailing Address

Branch: 133 WEST LOS ANGELES

Account Officer: Joe Smith

Home Phone Bus Phone Ext Birthdate Soc. Sec # CIN

Employment:

Position:

Type of Bus: Supervisor:

Time There: Full Time:

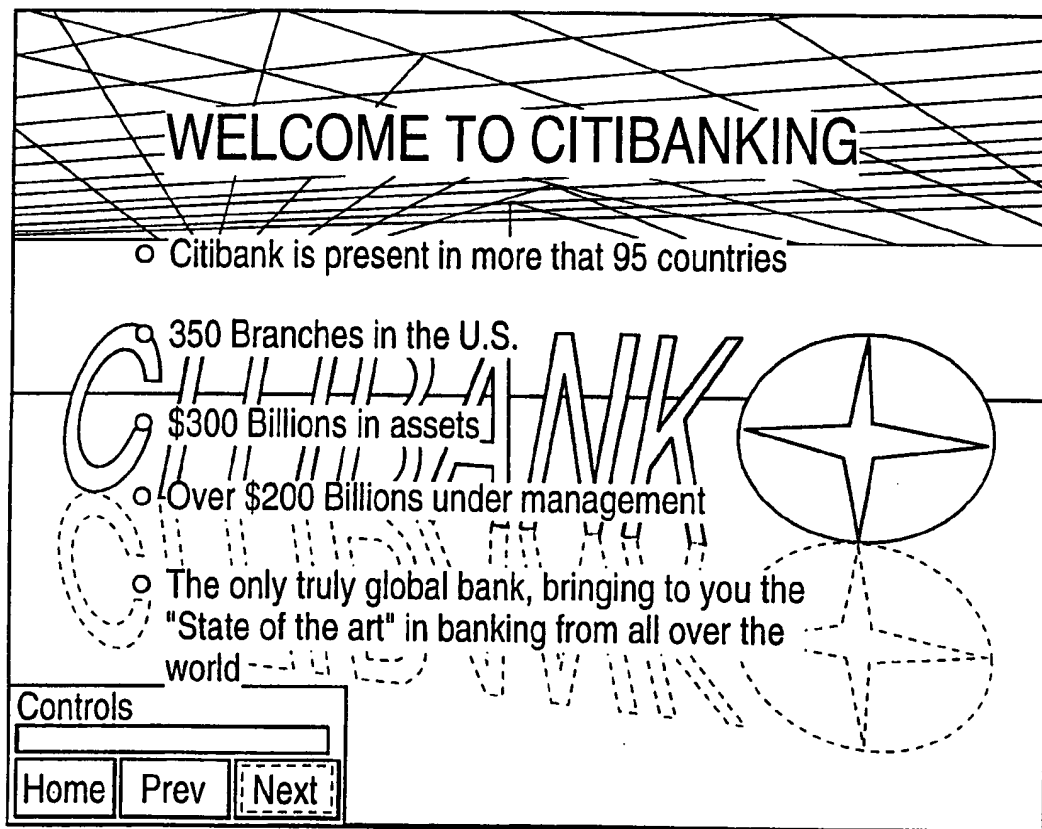
Current Employer

Identification/References

276 277

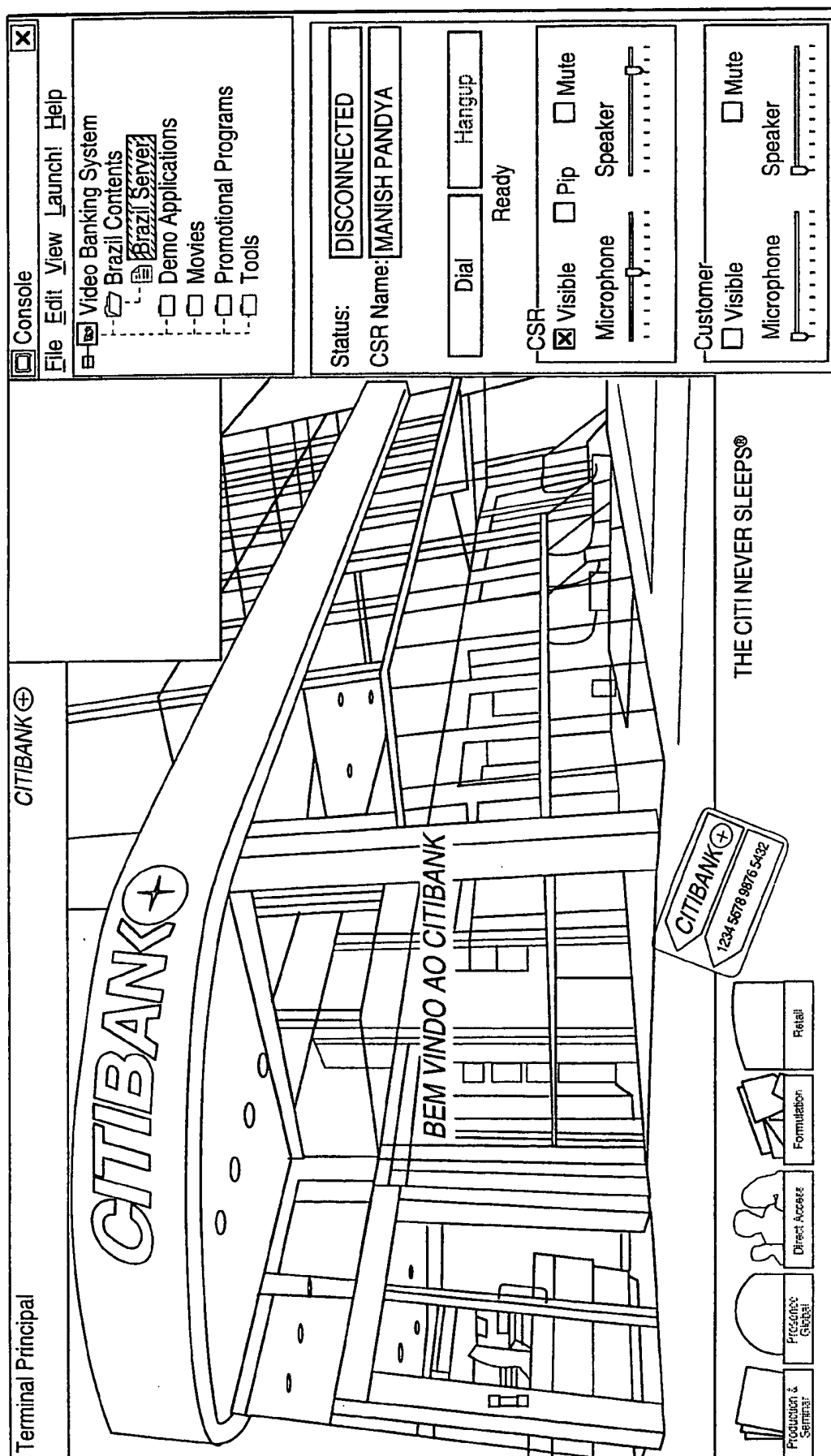
Account Information 278

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FIG. 31

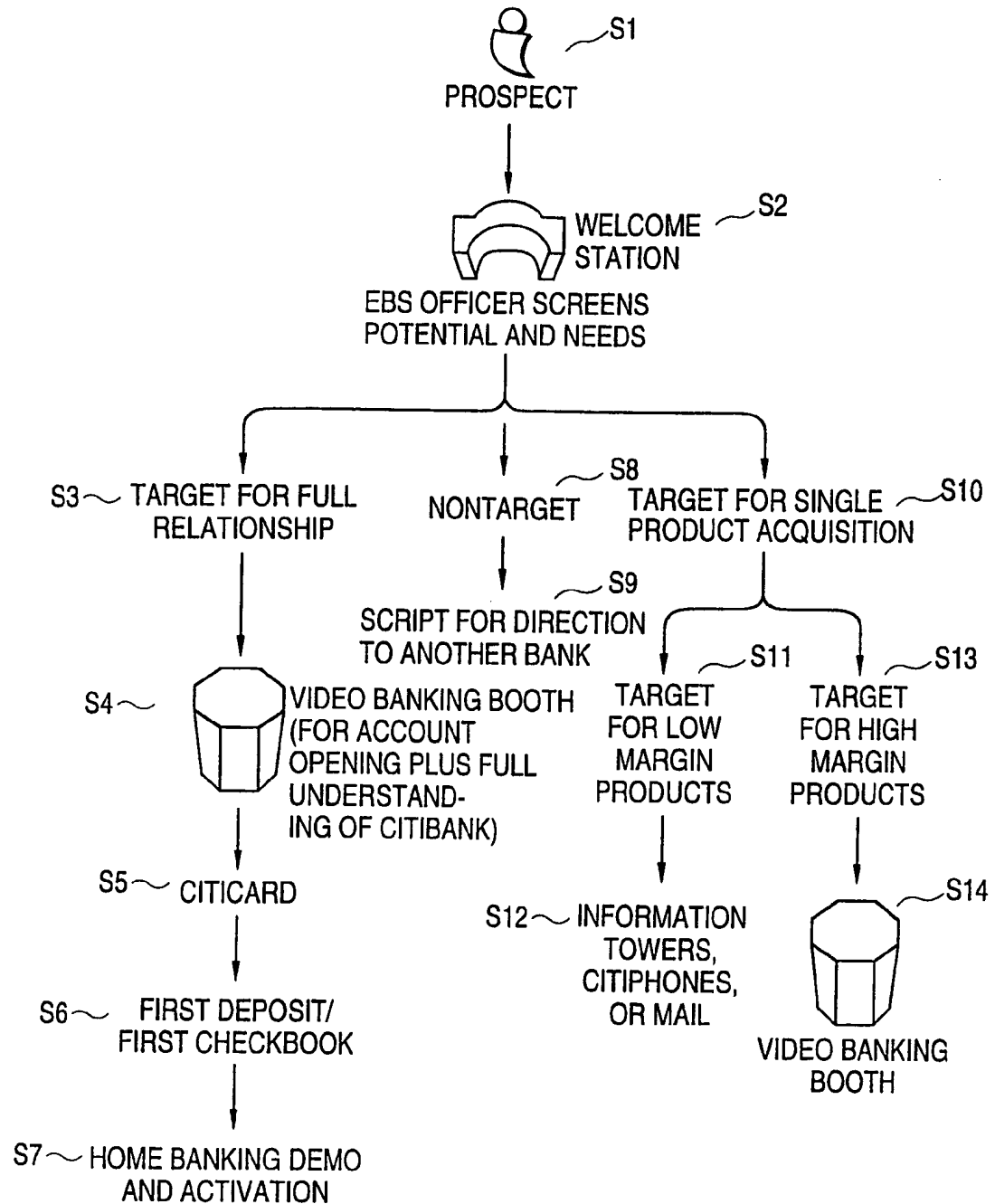
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FIG. 32



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FIG. 33



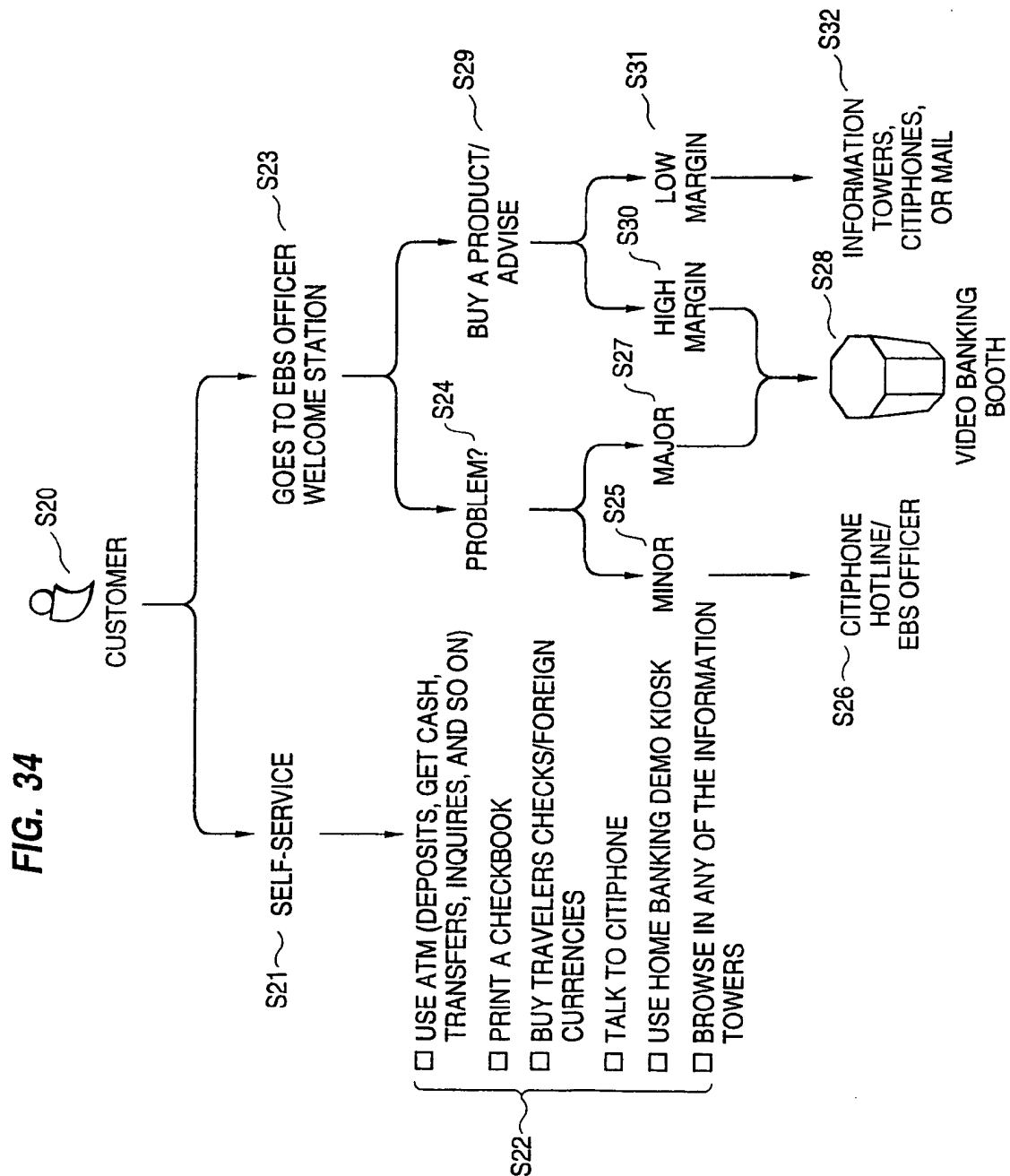
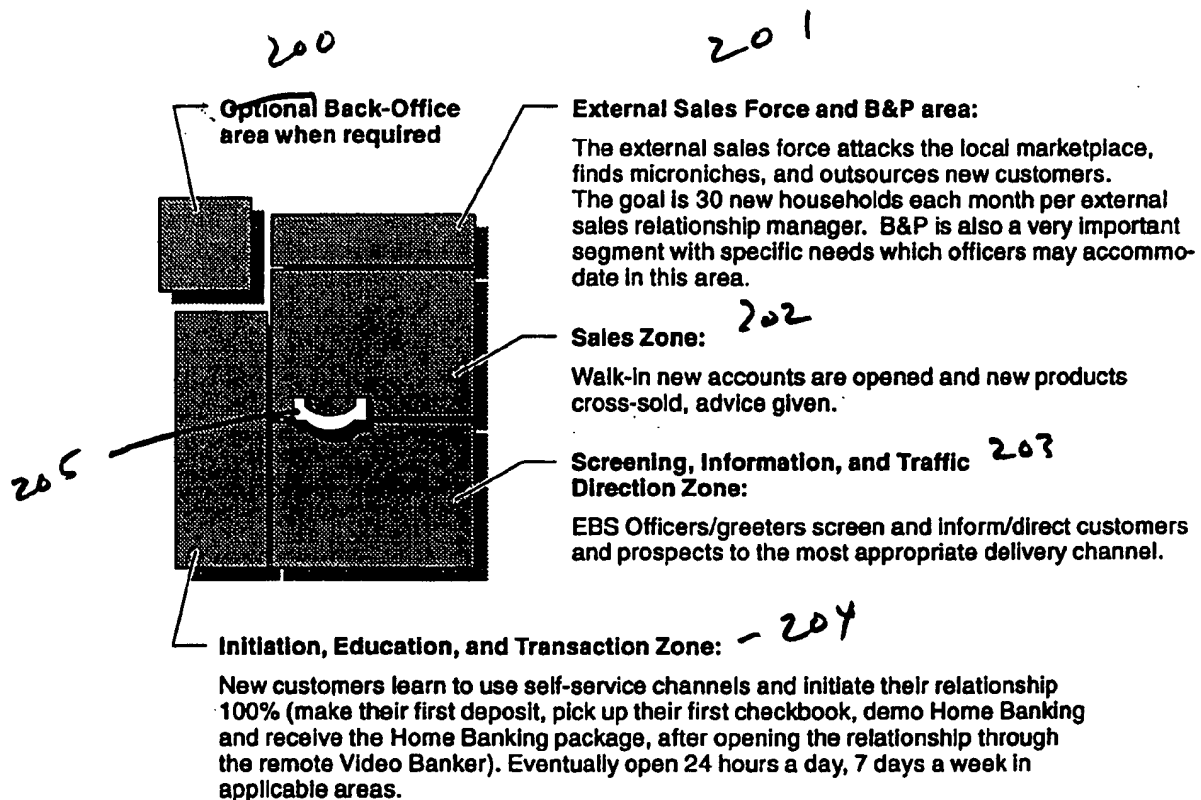
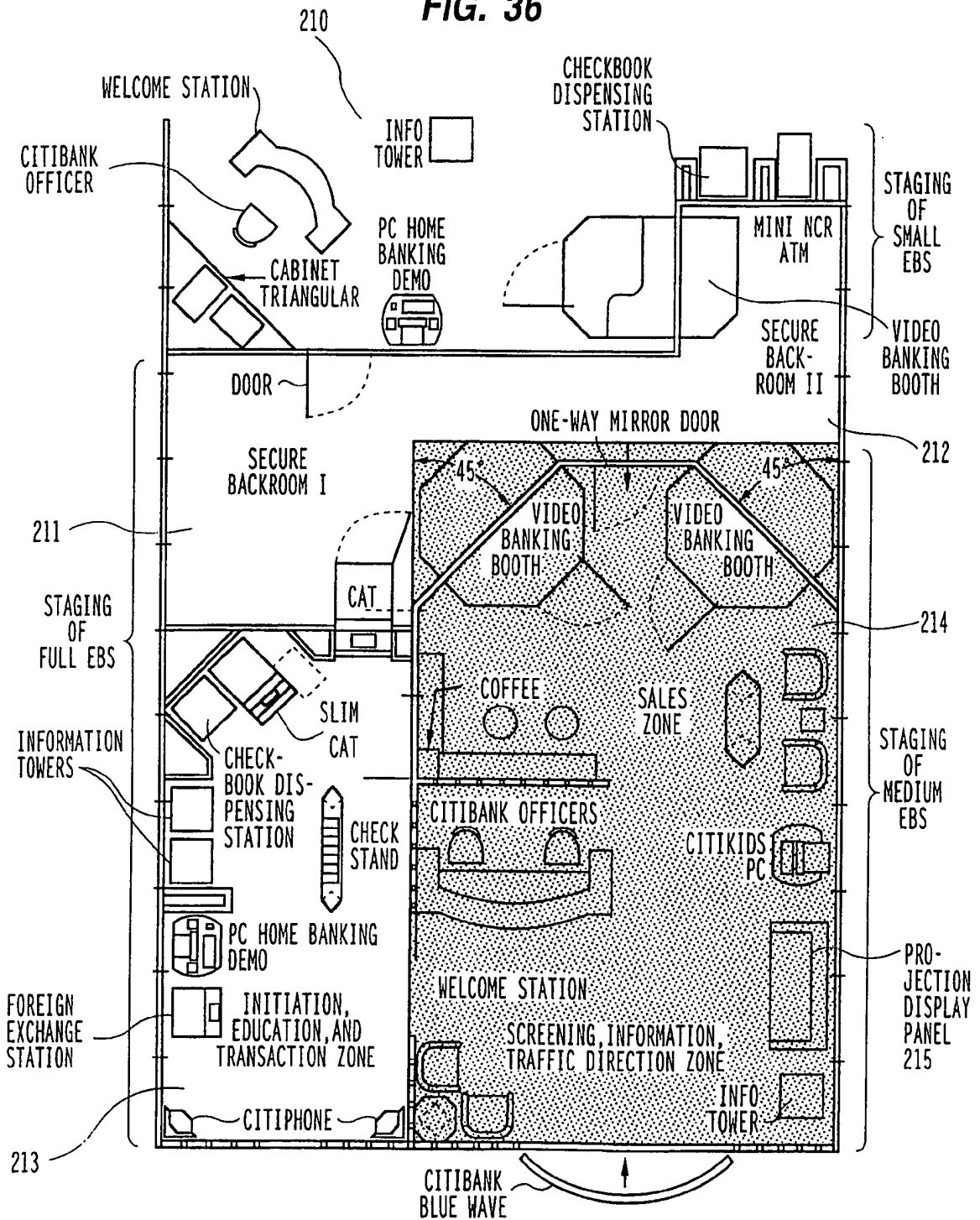


FIG. 33



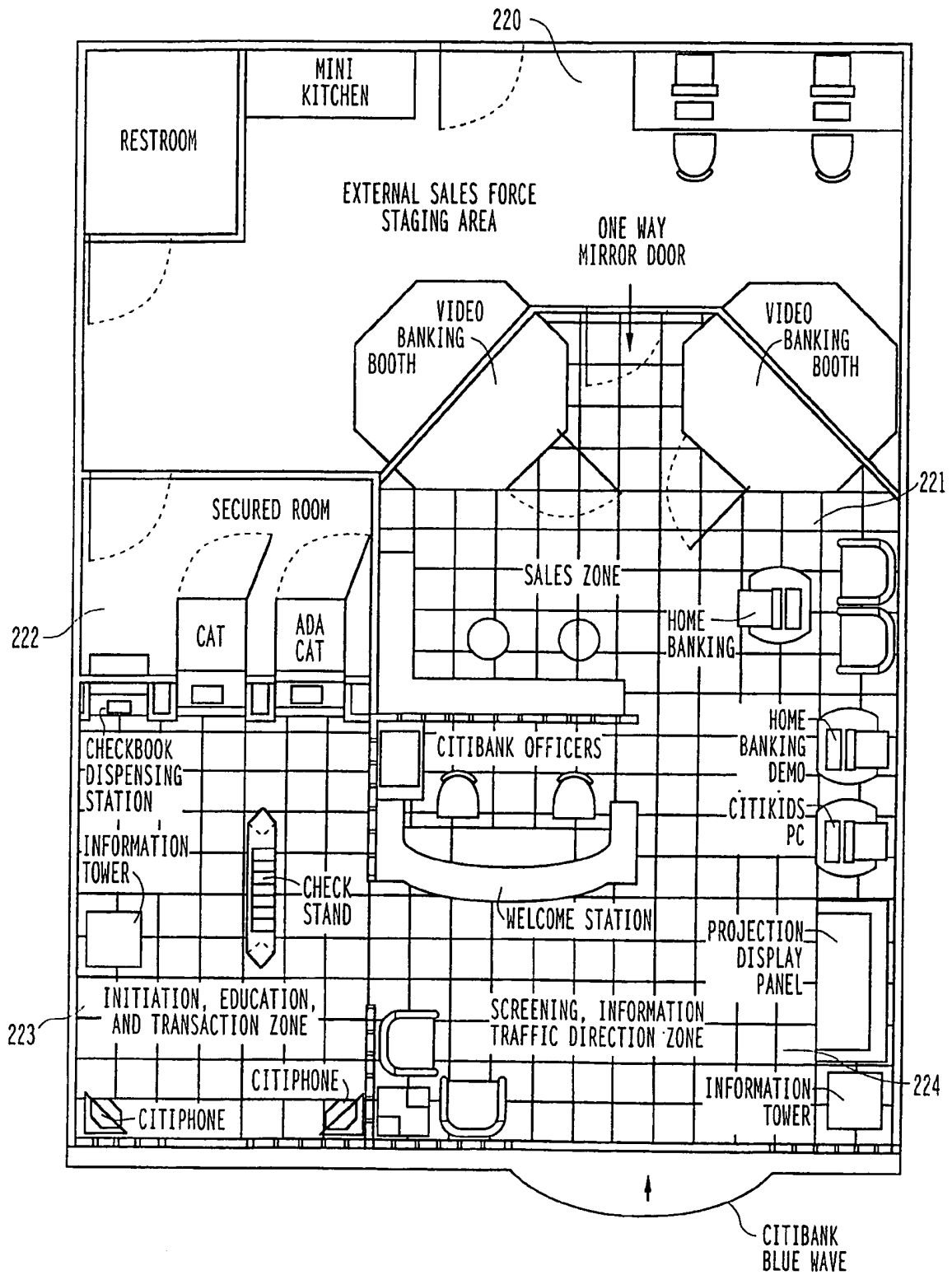
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FIG. 36

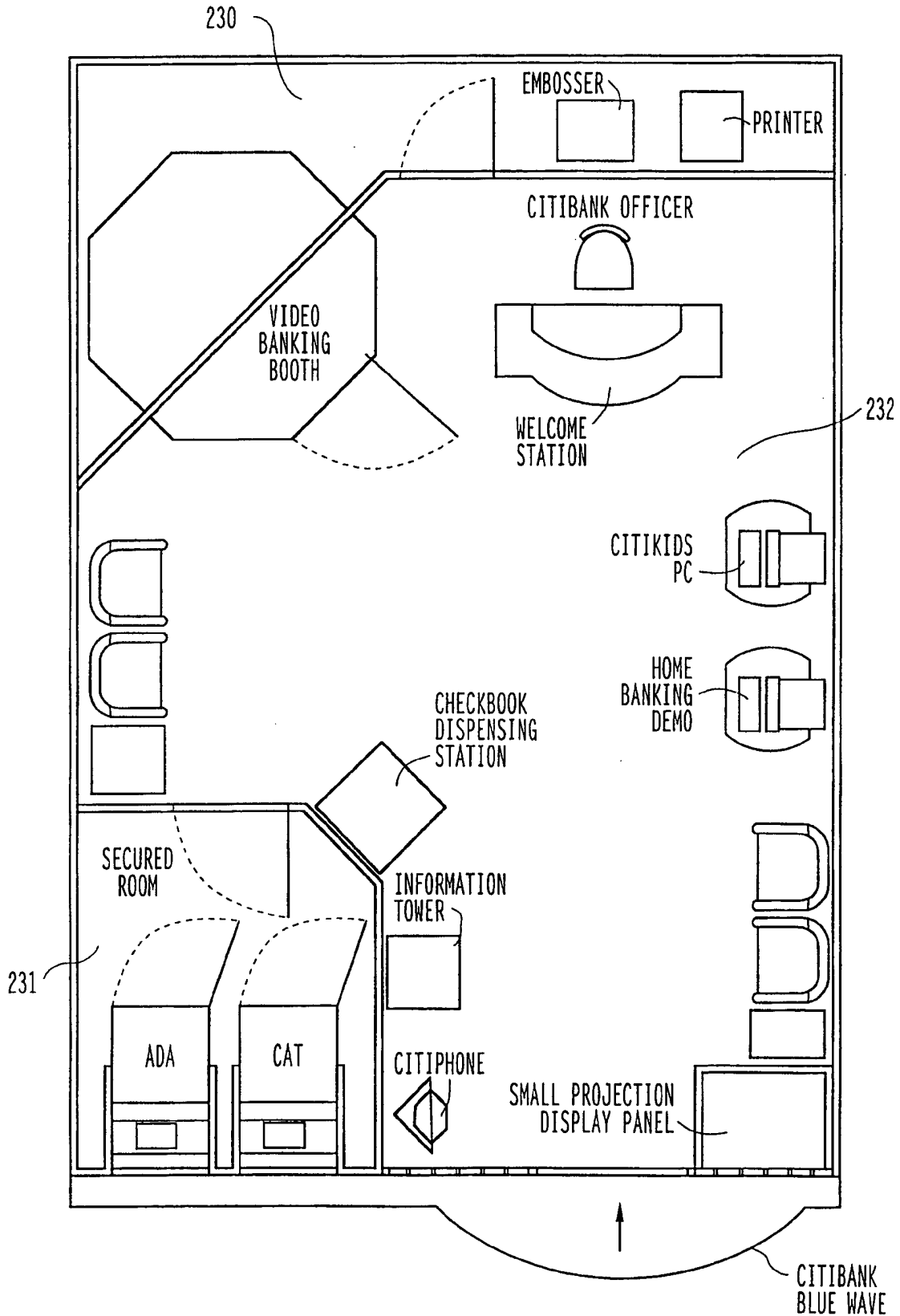


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FIG. 37



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FIG. 38



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FIG.39

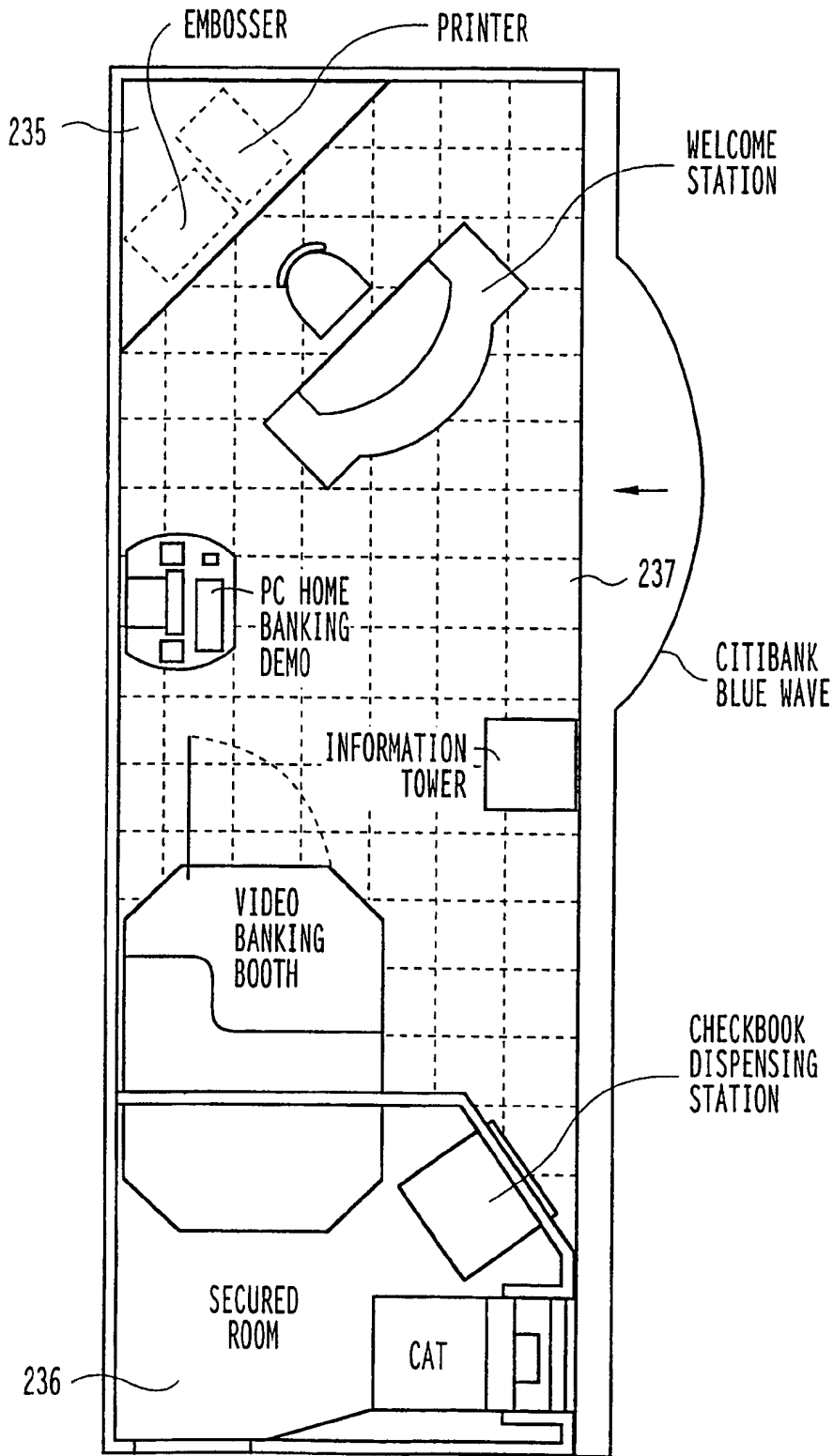
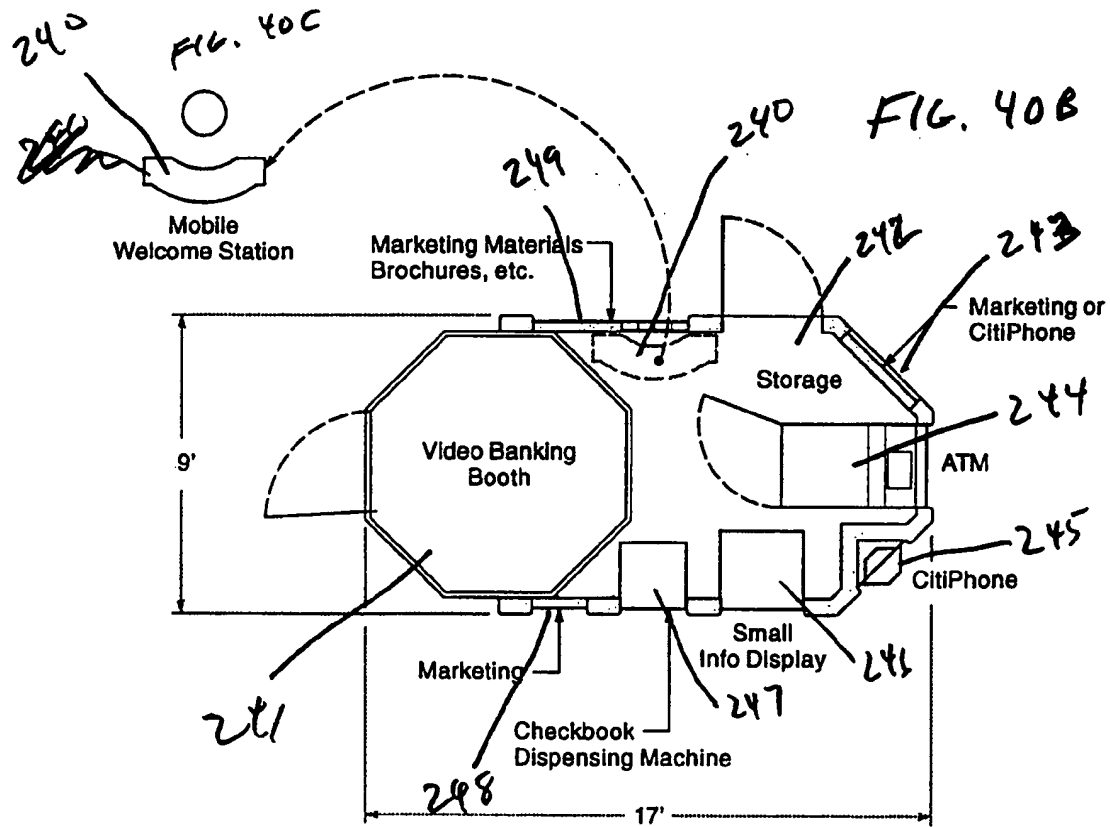
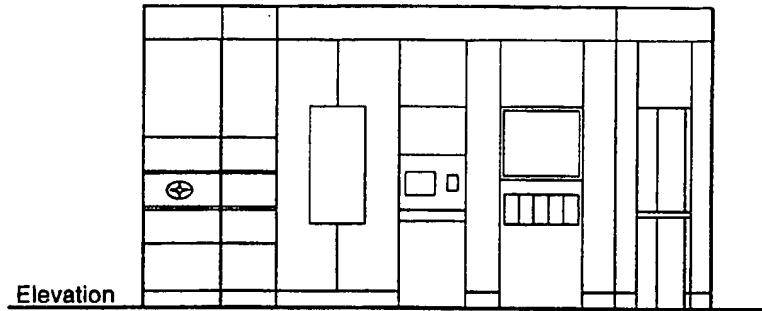


FIG. 40A



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FIG. 41A

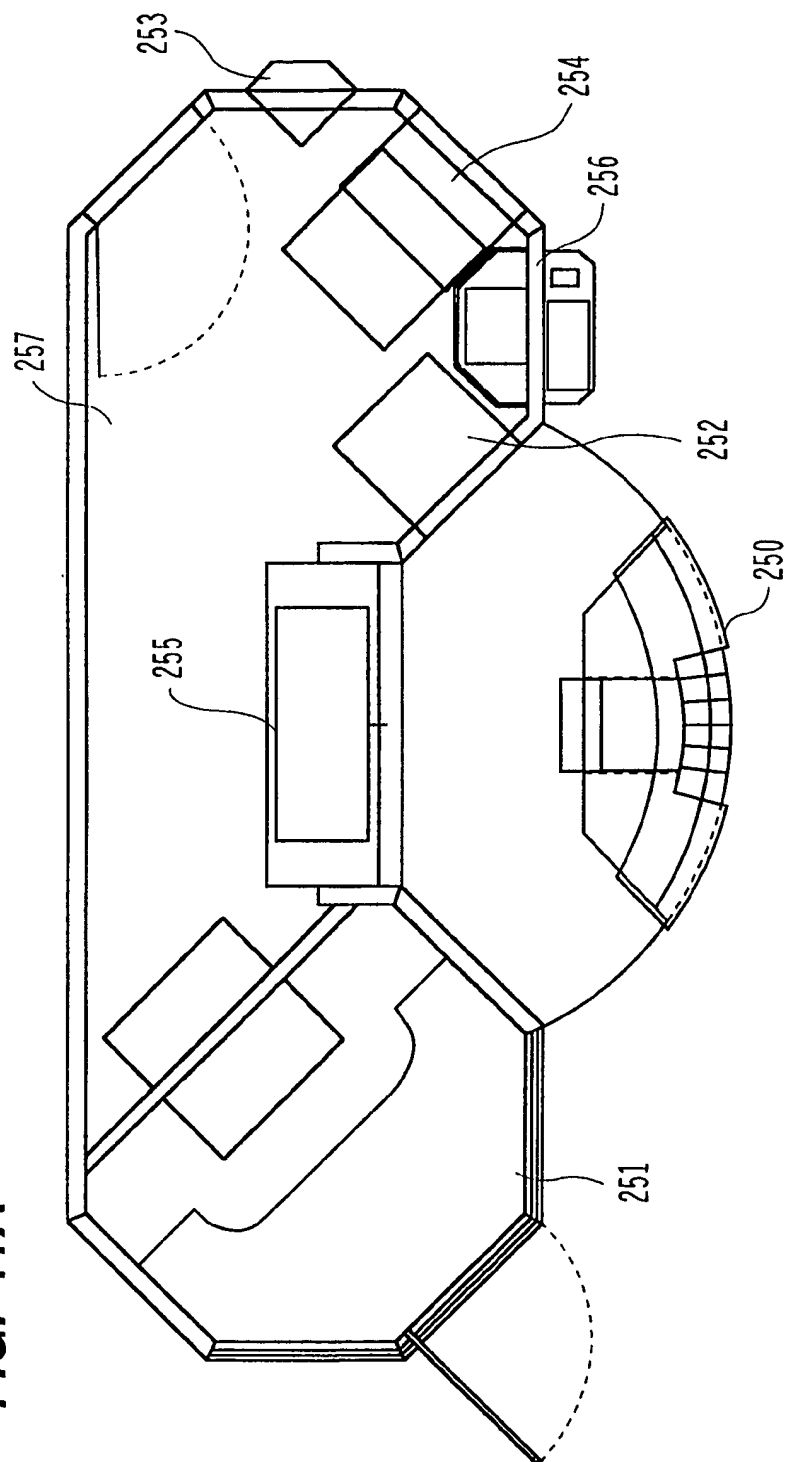
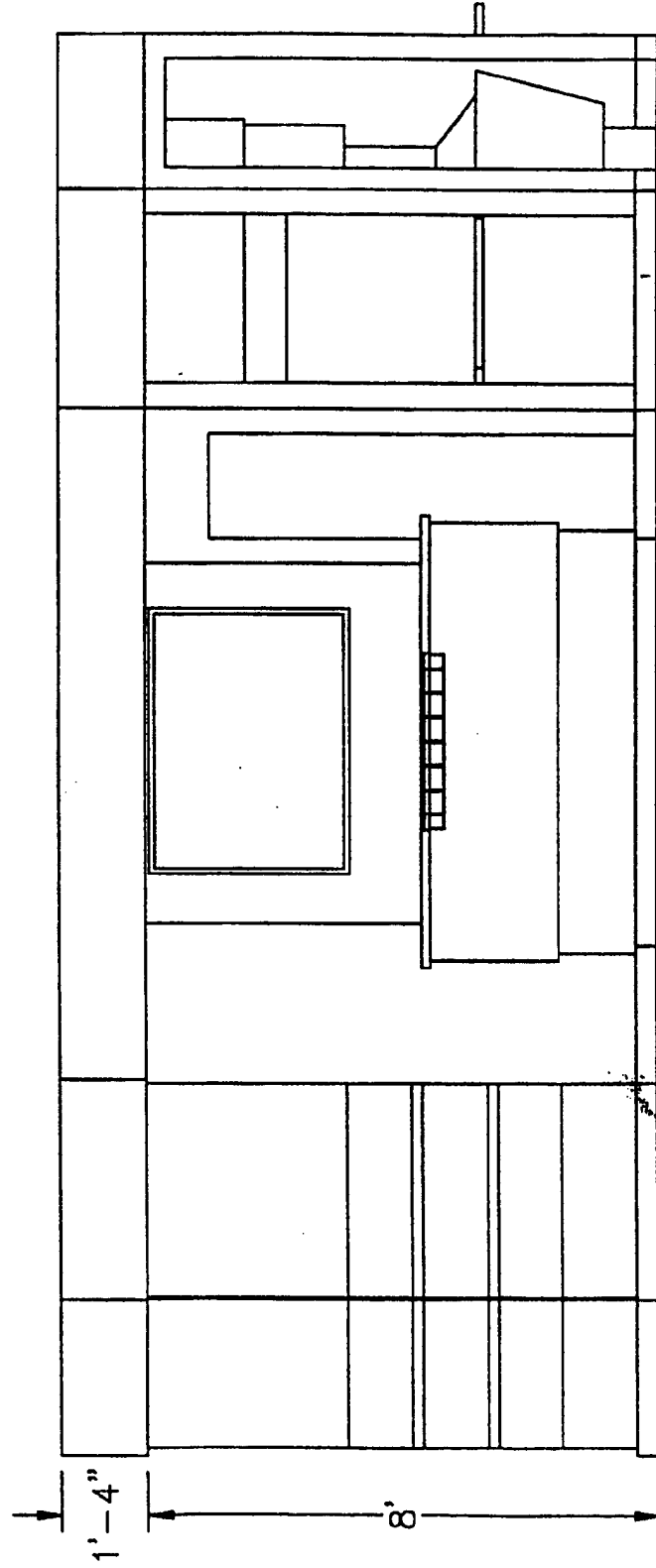


FIG. 41B



200 SQ. FT

ELEVATION

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US98/15802

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :G06F 17/60

US CL : 705/43, 35, 39, 42, 45

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/43, 35, 39, 42, 45

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, Dialog

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 5,774,663 A (RANDLE et al) 30 June 1998, entire document.	1-45
Y	US 5,604,341 A (GROSSI et al) 18 February 1997, entire document.	1-45
Y	US 5,600,114 A (DUNLAP et al) 04 February 1997, entire document.	1-45
Y	US 5,537,315 A (MITCHAM) 16 July 1996, abstract, Col 1, lines 8 - 29, Col 2, lines 33 - 42.	13
Y	US 4,600,828 A (NOGAMI et al) 15 July 1986, abstract, Col 1, lines 17 - 21 and 38 - 42, Col 2, lines 18 - 19,	19, 42

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

06 NOVEMBER 1998

Date of mailing of the international search report

11 JAN 1999

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